

DRAFT ENVIRONMENTAL ASSESSMENT

EASTON INDUSTRIAL ACCESS ROAD STUDY

EASTON, PRESQUE ISLE, FORT FAIRFIELD

AROOSTOOK COUNTY, MAINE

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Prepared Pursuant to 23 CFR 771 and 23 USC 138

by the

U.S. Department of Transportation

Federal Highway Administration

and

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Contents

CONTENTS.....	I
TABLES.....	IV
FIGURES.....	V
TERMS	I
ACRONYMS AND ABBREVIATIONS.....	I
EXECUTIVE SUMMARY	1
PURPOSE OF AND NEED FOR THE PROPOSED ACTION.....	1-1
1.1 STUDY HISTORY.....	1-1
1.2 STUDY AREA.....	1-1
1.3 PROJECT PURPOSE AND NEED	1-3
1.3.1 <i>Economic Importance of Huber and McCain</i>	1-3
1.3.2 <i>Truck Traffic to and From Easton Industrial Area</i> 1-	1-5
1.3.3 <i>Project Purpose and Need Statement</i>	1-6
1.3.4 <i>U.S. Army Corps of Engineers Basic Project Purpose</i>	1-6
1.4 OTHER RELEVANT EISS/EAS	1-6
1.5 FEDERAL AND STATE DECISIONS AND ACTIONS	1-7
1.6 SCOPE OF THIS ENVIRONMENTAL ANALYSIS	1-7
1.7 APPLICABLE REGULATIONS, REQUIRED COORDINATION, AND PERMITS.....	1-8
ALTERNATIVES	2-1
2.1 OVERVIEW OF ALTERNATIVE SELECTION PROCESS	2-1
2.2 MAINE SENSIBLE TRANSPORTATION POLICY ACT	2-1
2.3 ALTERNATIVES SCREENING	2-2
2.3.1 <i>Alternatives Considered</i>	2-4
2.3.2 <i>Preliminary Screening</i>	2-8
2.3.2.1 Travel Demand Shifts	2-9
2.3.2.2 Travel Time Savings	2-13
2.3.2.3 Travel Distance Savings	2-14
2.3.2.4 VMT/VHT Savings.....	2-15
2.3.2.5 Summary of Preliminary Screening	2-18
2.3.3 <i>Final Screening</i>	2-20
2.3.3.1 Construction Cost	2-20
2.3.3.2 Environmental Impacts	2-22
2.3.3.4 Summary of Final Screening	2-25
2.4 DESCRIPTION OF THE PREFERRED ALTERNATIVE	2-25

AFFECTED ENVIRONMENT	3-1
3.1 DESCRIPTION OF THE PREFERRED ALTERNATIVE	3-1
3.2 SOCIAL ENVIRONMENT	3-1
3.2.1 Land Use and Right-of-Way	3-1
3.2.2 Farms and Farmland	3-3
3.2.3 Community Facilities	3-4
3.2.4 Environmental Justice	3-4
3.2.5 Population, Demographics, and Economics	3-4
3.2.6 Historical and Archaeological Resources	3-5
3.2.7 Public Recreation/Conservation Lands	3-5
3.2.8 Hazardous Materials Sites/Contamination	3-6
3.2.9 Utilities	3-6
3.3 NATURAL ENVIRONMENT	3-7
3.3.1 Physical Geography and Soils	3-7
3.3.2 Aquatic Resources	3-7
3.3.2.1 Surface Public Drinking Water Supplies	3-7
3.3.2.2 Groundwater Drinking Water Supplies	3-8
3.3.2.3 Water Quality	3-8
3.3.2.4 Waterbodies and Waterways	3-9
3.3.2.5 Wetlands	3-9
3.3.3 Floodplains	3-11
3.3.4 Vegetation	3-11
3.3.5 Fisheries and Wildlife	3-11
3.3.6 Threatened and Endangered Species	3-12
3.4 ATMOSPHERIC ENVIRONMENT	3-13
3.4.1 Air Quality	3-13
3.4.2 Noise	3-13
3.4.2.1 Regulatory Context: Noise Standards and Criteria	3-15
3.4.2.2 Existing Noise Levels	3-18
3.5 TRANSPORTATION ENVIRONMENT	3-20
3.5.1 The Transportation System	3-20
3.5.2 Traffic Demands	3-20
3.5.3 System Continuity and Mobility	3-21
ENVIRONMENTAL CONSEQUENCES AND MITIGATION	4-1
4.1 INTRODUCTION	4-1
4.2 SOCIAL ENVIRONMENT	4-2
4.2.1 Land Use and Right-of-Way	4-2
4.2.2 Farms and Farmland	4-2
4.2.3 Environmental Justice	4-3
4.2.4 Population, Demographics, and Economics	4-4
4.2.5 Utilities	4-4
4.3 NATURAL ENVIRONMENT	4-5
4.3.1 Physical Geography and Soils	4-5
4.3.2 Aquatic Resources	4-5
4.3.2.1 Water Quality	4-5
4.3.2.2 Waterbodies and Waterways	4-6
4.3.2.3 Wetlands	4-7
4.3.3 Floodplains	4-9
4.3.4 Vegetation	4-9
4.3.5 Fisheries and Wildlife	4-10
4.4 ATMOSPHERIC ENVIRONMENT	4-10
4.4.1 Air Quality	4-10
4.4.2 Noise	4-11
4.4.2.1 No-Build Alternative	4-11
4.4.2.2 Preferred Alternative	4-11
4.4.2.3 Conclusions	4-12

4.5	TRANSPORTATION ENVIRONMENT.....	4-12
4.5.1	<i>Projected Demands</i>	4-12
4.5.2	<i>Travel Time/Travel Distance</i>	4-13
4.5.3	<i>VMT/VHT</i>	4-13
4.5.4	<i>System Continuity and Mobility</i>	4-13
4.6	TEMPORARY CONSTRUCTION IMPACTS.....	4-14
	COORDINATION AND CONSULTATION	5-1
5.1	FEDERAL, STATE AND LOCAL AGENCY COORDINATION.....	5-1
5.1.1	<i>Scoping</i>	5-1
5.1.2	<i>Interagency Coordination</i>	5-1
5.2	PUBLIC INVOLVEMENT	5-2
5.2.1	<i>Public Information Meetings</i>	5-2
5.2.2	<i>Coordination with Communities and Organizations</i>	5-3
	PREPARERS	6-1
	DRAFT EA RECIPIENTS	7-1
	STATE	7-1
	ELECTED OFFICIALS.....	7-1
	REGIONAL AGENCIES	7-2
	LOCAL COMMUNITIES	7-2
	OTHER INTERESTED PARTIES	7-2
	APPENDIX A AGENCY CORRESPONDENCE	A-1
	APPENDIX B TRAFFIC ANALYSIS MODELING DATA.....	B-1
	APPENDIX C PUBLIC PARTICIPATION DOCUMENTATION.....	C-1
	APPENDIX D AIR QUALITY ANALYSIS.....	D-1

Tables

Table No.	Description	Page
1-1	Environmental Permits Expected to be Required for the Preferred Alternative	1-9
2-1	Alternatives Considered	2-8
2-2	2023 Forecasted Demand for the Alternatives	2-10
2-3	2023 Forecasted Demand Shifts	2-12
2-4	Travel Time Savings (Minutes)	2-14
2-5	Travel Distance Savings	2-15
2-6	2023 Annual Vehicle-Miles Traveled (VHT) Change	2-16
2-7	2023 Annual Vehicle-Miles Traveled (VHT) Savings	2-17
2-8	Preliminary Alternative Design and Construction Cost Estimates	2-21
2-9	Anticipated Environmental Impacts	2-24
3-1	Noise Abatement Criteria (NAC)	3-16
3-2	Indoor and Outdoor Sound Levels	3-17
3-3	2001 Existing Sound Levels	3-19
4-1	Wetland Impacts from Preferred Alternative	4-8
4-2	2023 Predicted Sound Levels	4-12

Figures

Figure No.	Description	Page No.
1-1	Study Area	1-2
1-2	Existing Travel Routes to the Easton Industrial Area.....	1-4
2-1	Alternatives Considered for the Easton Access Industrial Road.....	2-4
2-2	Summary of Preliminary Screening	2-19
2-3	Summary of Preliminary Construction Costs.....	2-22
2-4	Social and Natural Environmental Resources	2-23
3-1	Preferred Alternative (Hm/L – Conant).....	3-2
3-2	Noise Receptor Locations.....	3-14

Terms

100-Year Floodplain – The portion of the floodplain submerged by the statistical flood event with a 1 percent probability of occurring in any year.

Adverse noise impact – A condition that exists if sound levels approach or exceed the Noise Abatement Criteria (NAC) or a 10-decibel (dBA) increase in ambient noise levels.

Advisory Council on Historic Preservation (ACHP) – The major policy advisor to the Federal government in the field of historic preservation. The 20 members of the Council are appointed by the President and include the Secretary of Agriculture, the Secretary of the Interior, the Architect of the Capitol, the chairman of the National Trust for Historic Preservation, and the president of the National Conference of State Historic Preservation Officers.

Annual Average Daily Traffic (AADT) – The total yearly traffic volume on a given roadway segment divided by the number of days in the year. AADT is expressed in vehicles per day (vpd).

Aquifer – Rock or sediment that is saturated with water and sufficiently permeable to transmit economically significant quantities of water to wells and springs.

Archaeological resources – Materials and objects that remain below the ground surface as evidence of the life and culture of historic, prehistoric, or ancient people, such as artifacts, structures, or settlements. Resources of concern are located in areas known or suspected to contain subsurface artifacts of pre-european or post-european settlement populations. Areas of expected moderate to high archaeological sensitivity according to various factors including present and past topography, exposure, slope, distance to water, and availability of food.

Army Corps of Engineers (ACOE) – A federal agency that administers Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act; its regulatory programs address wetlands and waterways protection.

Arterials – Roads with high traffic volumes that provide linkage between major cities and towns and developed areas, capable of attracting travel over long distances. Basically, they provide service to interstate and intercounty travel demand. The arterial system typically provides for high travel speeds and the longest trip movements. The degree of access control on an arterial may range from full control (freeways) to entrance control on, for example, an urban arterial through a densely developed commercial area.

Attainment area – A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (National Ambient Air Quality Standard) for the

pollutant. Attainment areas are defined using federal pollutant limits set by the U.S. Environmental Protection Agency.

Auxiliary lane - An additional travel lane, typically used where steep grades make it difficult for trucks to maintain the posted speed limit (also known as a truck climbing lane).

Best Management Practice (BMP) – A structural and/or management practice employed before, during and after construction to protect receiving water quality. These practices either provide techniques to reduce soil erosion or remove sediment and pollutants from surface runoff.

Biodiversity –The diversity of genes, species, and ecosystems. This term includes the entire hierarchy of ecological organization, and encompasses regional ecosystem diversity (landscape diversity), local ecosystem diversity (community diversity), species diversity, and genetic diversity within populations of a species.

Carbon monoxide (CO) – A colorless, odorless, tasteless gas formed in large part by incomplete combustion of fuel. Full combustion activities (i.e. transportation, industrial processes, space heating, etc.) are the major sources of CO.

dBA –An abbreviation for A-weighted decibel. The decibel is a unit used to describe sound pressure levels on a logarithmic scale. For community noise impact assessment, an A-weighted frequency filter is used to approximate the way humans hear sound.

Deciduous – Refers to woody vegetation, such as oak or maple trees, that shed their leaves after the growing season.

Demand – Vehicular traffic demand (volume) on a given roadway segment, expressed in vehicles per day (vpd).

Demand shift – The change in demand (volume) on a given roadway segment, expressed in vehicles per day (vpd). Demand shifts can be caused by new corridors that provide a faster and/or shorter travel route.

Direct impacts – The immediate effects on the social, economic, and physical environment caused by the construction and operation of a roadway; these impacts are usually experienced within the right-of-way or in the immediate vicinity of the roadway or other element of the proposed action.

Draft Environmental Impact Statement (DEIS) – The document prepared by FHWA in accordance with FHWA NEPA regulations (23 CFR Part 771.123). These regulations require that a DEIS evaluate all reasonable alternatives considered, discuss the reasons that alternatives have been eliminated from detailed study, summarize the studies, reviews, consultations, and coordination required by environmental laws and Executive Orders.

Endangered Species – Any species that is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment – A public document prepared pursuant to the National Environmental Policy Act (NEPA) that analyzes the environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of impacts.

Environmental Justice – Executive Order 12898 requires each federal agency to “make achieving environmental justice part of its mission by identifying and addressing... disproportionately high and adverse human health or environmental impacts on minority populations and low-income populations.”

Eutrophication – Change in the biological and physical characteristics of a body of water due to increased nutrient input that results in increased productivity. Eutrophication may occur naturally or through man-induced changes in nutrient inputs.

Farmland Protection Policy Act (FPPA) – A statute enacted in 1981 by the United States Department of Agriculture (USDA) to ensure that significant agricultural lands be protected from conversion to non-agricultural uses. For highway projects receiving federal aid, the regulations promulgated under the FPPA (7 CFR Part 658, 1984) require a state highway authority (MDOT) to coordinate with the USDA Natural Resources Conservation Service. The FPPA regulates four types of farmland soils; prime farmland, unique farmland, farmland of state-wide importance, and farmland of local importance.

Farmland Soils – Soils suited to producing crops; those with soil quality, growing season and moisture supply needed to produce a sustainable yield when treated and managed using acceptable methods. Specifically, farmland soils are those soil types designated by the Natural Resources Conservation Service (NRCS) in accordance with the Farmland Protection Policy Act (FPPA) of 1981 by the United States Department of Agriculture (USDA).

Federal Emergency Management Agency (FEMA) – A federal agency that regulates federal actions in floodplains.

Federal Highway Administration (FHWA) – The branch of the U.S. Department of Transportation responsible for administering the funding of federal-aid highway projects.

Finding of No Significant Impact (FONSI)- a public document that briefly presents the reasons why an action will not have a significant impact on the human environment, and therefore does not require the preparation of an EIS.

Floodplain – The level area adjoining a river channel inundated during periods of high flow.

Floodway – The channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order that the 100-year flood be carried without substantial increases in flood heights.

Geographic Information System (GIS) – A computer-based application used to perform spatial analysis.

Grade – The slope of a road along the direction of travel, normally characterized by the vertical rise per unit of longitudinal distance.

GW-A – The highest groundwater classification in Maine. GW-A is applied to water suitable for direct human consumption without treatment.

Historic resources – Properties, structures and districts that are listed in or have been determined to be eligible for listing in the National Register of Historic Places.

Hydric soils – Soils that are saturated, flooded, or ponded long enough during the growing season to develop at least temporary conditions where there is no free oxygen in the soil around the roots. Hydric soils correspond to federally and state regulated wetlands in many circumstances.

Lacustrine – Of and related to lakes.

Land and Water Conservation Fund – A system for funding Federal, State and local parks and conservation areas, created by the Land and Water Conservation Fund Act of 1964.

Link – A new or existing roadway segment between two defined end-points.

Labor Market Area (LMA) – LMAs are regional areas with a high concentration of employment opportunities. These are economically integrated units within which workers may readily change job without changing their place of residence.

Maine Sensible Transportation Policy Act (STPA) – The Maine Sensible Transportation Policy Act is a state law enacted in 1991 by the citizens of Maine that provides a decision making framework for examining a range of alternatives. The STPA is applicable to transportation planning decisions, capital investment decisions, and project selection decisions made by the Maine Department of Transportation (MDOT).

Microscale analysis – An analysis of air for chemical constituents, typically conducted for a small study area such as an intersection.

Mitigation – Actions that avoid, minimize, or compensate for potential adverse impacts.

National Ambient Air Quality Standards (NAAQS) – The prescribed level of pollutants in the outside air that cannot be exceeded during a specified time in a specified geographic area.

National Environmental Policy Act of 1969, as amended (NEPA) – The federal legislation that requires an interdisciplinary approach in planning and decision-making for federal-aid actions. The Act includes requirements for the contents of environmental impact statements that are to accompany every recommendation for major federal actions significantly affecting the quality of the human environment. The interdisciplinary study approach includes the analysis of potential impacts to the natural, social and economic environment.

National Register of Historic Places – A list of structures, sites and districts of national historical significance as determined by the Advisory Council on Historic Preservation under the National Historic Preservation Act.

National Wetlands Inventory (NWI) – A program administered by the U.S. Fish and Wildlife Service for mapping and classifying wetland resources in the United States.

Natural Resources Conservation Service (NRCS) – Formerly the Soil Conservation Service, NRCS is a department within the United State Department of Agriculture, that is responsible for administering the Farmland Protection Policy Act.

Noise abatement criteria (NAC)– Noise levels measured in decibels that are used as a basis of comparison for evaluating the impact from predicted design year noise and for determining whether noise abatement measures should be considered.

Ozone – A gas which is a variety of oxygen. Ozone is a pollutant regulated by the Clean Air Act Amendments of 1990. Ground-level ozone is the main component of smog. Ozone is not directly emitted by motor vehicles, but is formed when oxides of nitrogen react with sunlight.

Palustrine – The group of vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes.

Palustrine Forested Wetland (PFO) – A palustrine wetland dominated by trees, commonly referred to as a swamp.

Palustrine Emergent Wetland (PEM) – A palustrine wetland dominated by herbaceous species, typically cattails, sedges and grasses, commonly referred to as a marsh.

Palustrine Scrub-Shrub Wetland (PSS) – A palustrine wetland dominated by shrubs.

Peak hour – The hour of the day when traffic volume on a given roadway is highest. A separate peak hour can be defined for morning and evening periods.

Peak Hour Leq – Represents the noisiest hour of the day/night and usually occurs during peak periods of motor vehicle traffic. The Leq is the equivalent sound level measurement, which means it averages background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time.

PM10 - is particulate matter (PM) with a mass median aerodynamic diameter less than 10 micrometers (um). PM10 is one of seven air pollutants the EPA regulates under the NAAQS.

Receptor – Locations that may be affected by noise: sensitive receptors include residences, parks, schools, churches, libraries, hotels, and other public buildings.

Record of Decision (ROD) – The document, prepared by the Federal Highway Administration, that presents the basis for the Federal agency action, summarizes

any mitigation measures to be incorporated, and documents any required Section 4(f) approvals. No Federal agency action may be undertaken until a Record of Decision has been signed. A Record of Decision is prepared no sooner than 30 days after the public release of the FEIS.

Relocations – The displacement of a residence, business or other structure from a property owner, for public use, that requires the residents or business to be moved to an alternate location.

Riverine – Of and relating to rivers.

Rural – A rural community is defined as an area with: 1) a population less than 2,500 persons or; 2) a population between 2,500 and 6,000 persons and a worker-to-resident worker ratio less than 1.0.

Section 106 of the Historic Preservation Act (Section 106) – The National Historic Preservation Act of 1996 (16 U.S.C. 470f), Section 106, requires Federal agencies to take into account the effect of their undertakings on properties included in or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council on Historic Preservation the opportunity to comment on such undertakings.

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C., Section 303) (Section 4(f)) – Legislation protecting publicly owned parks, public recreation areas, historic properties or wildlife and waterfowl refuges. The statute states that no Department of Transportation project may use land from these areas unless there is demonstrated to be no prudent and feasible alternative to using the land, and the project includes all possible planning to minimize harm resulting from the use.

Section 404 of the Clean Water Act (Section 404) – The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 401 et seq.) is the enabling legislation for protection of waters of the United States by the Army Corps of Engineers and the U.S. Environmental Protection Agency.

Section 6(f) of the Land and Water Conservation Funds Act (Section 6(f)) – Legislation that provides for the public purchase and preservation of tracts of land.

Significant Sand and Gravel Aquifer – A porous formation of ice-contact and glacial outwash sand and gravel that contains significant removable quantities of water which is likely to provide drinking water supplies.

Significant Wildlife Habitat – Wildlife habitats, including deer wintering yards, waterfowl and wading bird habitat, seabird nesting habitat, and significant vernal pools, that are protected under 38 M.R.S.A. § 480-B.

Sole Source Aquifer (SSA) – An aquifer designated by EPA as the “sole or principal source” of drinking water for a given aquifer service area; that is, an aquifer that is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should the aquifer become contaminated.

State Implementation Plan (SIP) – A plan created under The 1990 Clean Air Act Amendments (CAAA) that establishes emission reduction requirements for ozone

and carbon monoxide non-attainment areas. Proposed projects must demonstrate that the impacts of their emissions are consistent with the appropriate SIP.

Stormwater runoff – The portion of precipitation that flows toward stream channels, lakes, or other waterbodies as surface flow.

Surface Water Supply Watershed – The watershed that contributes to a public drinking water supply.

Threatened Species – Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

United States Department of Agriculture (USDA) – A federal agency responsible for administering programs that address farming issues

United States Environmental Protection Agency (EPA) – A federal agency responsible for administering programs that address environmental issues.

United States Fish and Wildlife Service (USFWS) – A federal agency responsible for addressing the protection of fish and wildlife including rare, threatened, or endangered species. The USFWS plays an advisory role in the Section 404 regulatory program administered by the U.S. Army Corps of Engineers.

Upgrade – A geometric improvement to an existing roadway segment.

Urban – An urban community is defined as an area with: 1) a population greater than 7,500 persons or; 2) a population between 2,500 and 7,500 persons and a worker-to-resident worker ratio greater than 1.0.

Vegetation cover type – A biological community characterized by certain vegetation characteristics, such as hardwood forest, mixed forest, shrub, herbaceous, and urban or residential managed vegetation.

Vehicle-Hours Traveled (VHT) – VHT is a measure of automobile use and trip time. One vehicle traveling one hour constitutes one vehicle-hour.

Vehicle-Miles Traveled (VMT) – VMT is a measure of automobile use and trip length. One vehicle traveling one mile constitutes one vehicle-mile.

Waterfowl Habitat – Wetlands that provide habitat for waterfowl (geese, brant, ducks) and that meet certain criteria for size, quality, and percent open water as established by Department of Inland Fish & Wildlife regulations.

Watershed – A region or area that contains all land ultimately draining to a water course, body of water, or aquifer.

Wetland – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Acronyms and Abbreviations

AADT – Annual Average Daily Traffic

ACOE – United States Army Corps of Engineers

ACTS – Aroostook County Transportation Study

ATR – Automated Traffic Recorder

BEA – Bureau of Economic Analysis

BMP – Best Management Practice

BTIP – Biennial Transportation Improvement Program

CAL3QHC – EPA’s Modeling Methodology for Predicting Pollutant Concentrations near Roadway Intersections

CEQ – Council on Environmental Quality

CFR – Code of Federal Regulations

CO – Carbon monoxide

dBA – Loudness (sound pressure level) measured on a logarithmic scale in units of decibels (dB), using an A-weighted filter

DEIS – Draft Environmental Impact Statement

EA – Environmental Assessment

EIS – Environmental Impact Statement

EPA –U.S. Environmental Protection Agency

FEMA – Federal Emergency Management Agency

FHWA – Federal Highway Administration

FONSI – Finding of No Significant Impact

FPPA – Farmland Protection Policy Act

GIS – Geographic Information Systems

ITS – Interconnecting Trail System

Leq – One-hour equivalent sound level

LMA – Labor Market Area

MDEP – Maine Department of Environmental Protection

MDIF&W – Maine Department of Inland Fisheries and Wildlife

MDOT – Maine Department of Transportation
MHPC – Maine Historic Preservation Commission
MNAP – Maine Natural Areas Program
MOBILE5b – Mobile Source Emission Factor Model
M.R.S.A. – Maine Revised Statutes Annotated
NAAQS – National Ambient Air Quality Standards
NAC – Noise Abatement Criteria
NEPA – National Environmental Policy Act
NPDES – National Pollutant Discharge Elimination System
NPS – Nonpoint source
NRCS – Natural Resource Conservation Service
NRIMC – Natural Resource and Information Mapping Center
NRPA – Maine Natural Resources Protection Act
NWI – National Wetlands Inventory
OSHA – Occupational Safety and Health Administration
OGIS – Maine Office of Geographic Information Systems
PEM – Palustrine Emergent Wetland
PFO – Palustrine Forested Wetland
PM10 - particulate matter with a mass median aerodynamic diameter less than 10 micrometers (um).
ppm – parts per million
PSS – Palustrine Scrub-Shrub Wetland
ROD – Record Of Decision
SCS – Soil Conservation Service (now the NRCS)
SHPO – State Historic Preservation Officer
STPA – Maine Sensible Transportation Policy Act
TNM – Traffic Noise Model
U.S.C. – United States Code
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
vpd – vehicles per day
VHT – Vehicle-Hours Traveled

VMT – Vehicle-Miles Traveled

Executive Summary

The Maine Department of Transportation (MDOT) proposes to construct a new location roadway connecting Route 163/167 in Presque Isle to the industrial area adjacent to Station Road in Easton. This industrial area is home to McCain Foods' potato processing plant and the J.M. Huber Corporation's Engineered Woods plant. This Draft Environmental Assessment (Draft EA) documents the alternatives analysis for the new road and describes the expected environmental impacts that would result from construction and use of the road. The Purpose of the new roadway is to:

- improve the movement of goods to and from the Easton industrial area;
- support continued economic growth in the region; and
- improve the human environment in downtown Presque Isle by reducing the amount of truck traffic passing through it.

Eleven alternatives were screened down to select a Preferred Alternative that best meets the project's Purpose and Need. The initial screening examined how the 11 alternatives benefited transportation. The six best performing alternatives from the initial screening were then reviewed based upon such factors as constructability, cost, and environmental impacts to select a Preferred Alternative.

The Preferred Alternative (Hm/L Conant) consists of a new location roadway and an upgrade of a portion of Conant Road. The new location roadway is approximately 2.2 kilometers (1.4 miles) long, extending between Routes 163/167 and Conant Road. The upgrade of Conant Road would extend from the intersection with the new location roadway to Station Road, a distance of approximately 5.1 kilometers (3.2 miles). MDOT is committed to beginning construction on the new location roadway portion of the project in 2002. The Conant Road upgrade would be constructed at a later time.

Construction of the Preferred Alternative is expected to result in the following environmental impacts:

- taking approximately 18.5 hectares (45.8 acres) of cultivated farmland along the segment of new location roadway and along Conant Road;

- affecting up to 0.34 hectares (0.83 acres) of 100-year floodplain (volume has not yet been calculated) along Conant Road; and
- affecting up to 0.29 hectares (0.72 acre) of wetlands along the Conant Road component.

The Preferred Alternative is expected to have a beneficial effect on air quality by reducing both vehicle-miles traveled and vehicle-hours traveled. It is also expected to reduce noise levels and particulate matter in downtown Presque Isle by diverting truck traffic from the area. Overall, construction and use of the Preferred Alternative is not expected to have any significant impact on the human environment.

Purpose of and Need for the Proposed Action

This chapter provides background on the study, defines the Study Area and the Project Purpose and Need, and outlines the applicable regulations and permits required for the project.

1.1 Study History

In the late 1990's, MDOT in coordination with the City of Presque Isle, began to look at ways to reduce truck traffic in the downtown area as a way to help reduce the amount of particulate matter and improve air quality in Presque Isle. As part of this effort, MDOT began studying a proposed new connector to the Easton industrial area. They looked at three initial alternatives, and selected one primarily because the right-of-way for it was readily available. The alternative chosen (referred to as Alternative 3 in this document) was presented to the public at a hearing held in Easton on December 27, 2000. The Maine Department of Inland Fisheries and Wildlife (MDIF&W) opposed this alternative because of its proximity to the Christina Reservoir. The reservoir and its surrounding wetlands are designated as Significant Wildlife Habitat under Maine's Natural Resources Protection Act (38. M.R.S.A. § 480 Chapter 3, §§ 480-A to 480-Z) (NRPA) because the reservoir provides important waterfowl habitat. In light of MDIF&W's comments a broader search for a new alternative was begun in early 2001. This Draft EA presents the alternatives analysis that was performed to select a Preferred Alternative and the environmental impacts that are expected to result.

1.2 Study Area

Figure 1-1, page 1-2, depicts the project Study Area. The Study Area is within the City of Presque Isle and the towns of Easton and Fort Fairfield in Aroostook County, Maine. The Study Area is generally bounded to the south by Conant Road and to the north by Route 163/167. The Study Area is rural and consists primarily of forests and farms, with sparse residential development along the roadways. The terrain in the Study Area is rolling, with elevations ranging from approximately 116 to 262 meters (380 to 860 feet).

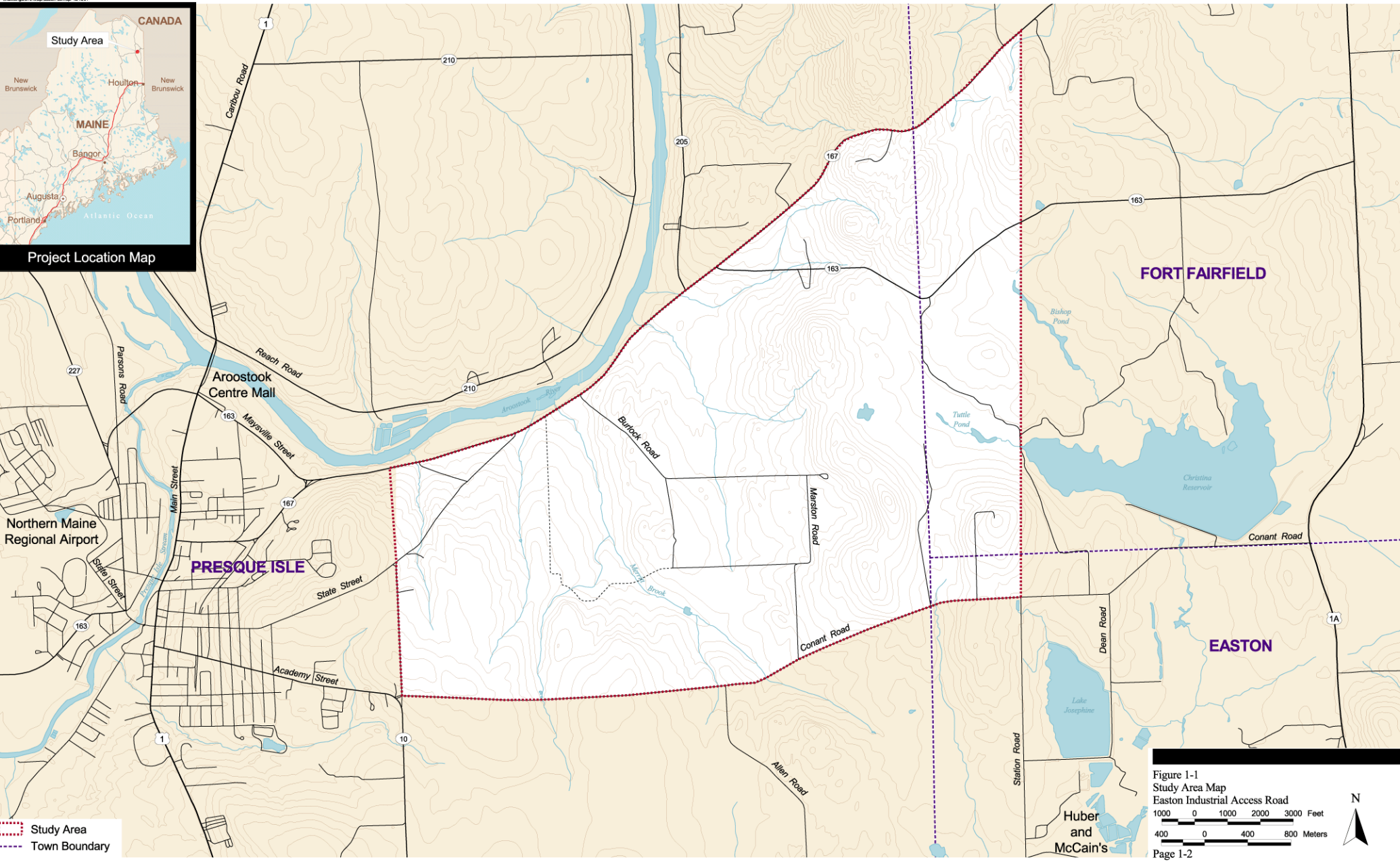


Figure 1-1
Study Area Map
Easton Industrial Access Road

1000 0 1000 2000 3000 Feet
400 0 400 800 Meters

Page 1-2

N

1.3 Project Purpose and Need

Large volumes of raw materials are transported from regions north and west of Presque Isle and transported to the McCain Foods, Inc. (McCain's) potato processing plant and the J.M. Huber Corporation's (Huber) Engineered Woods plant on Station Road in Easton.

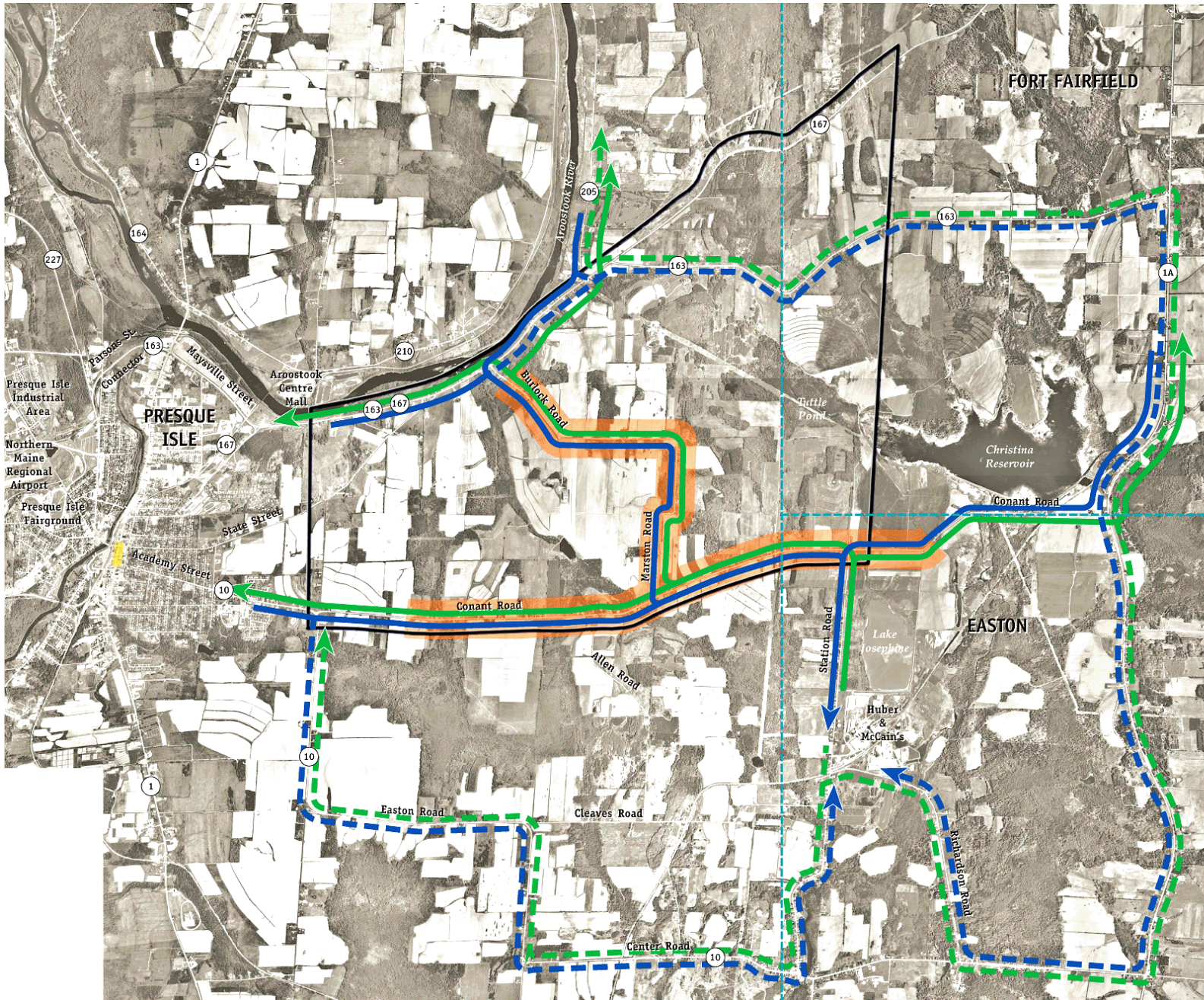
Many of the trucks pass through downtown Presque Isle on their way to Easton, causing traffic backups and lessening the quality of life in the area because of noise and air quality impacts. Furthermore, the route through Presque Isle to reach Station Road is circuitous, passes through residential areas, and over roads that were not designed to handle heavy truck weights. The existing roadway network linking Easton to the north and west is not adequate to accommodate the level of heavy truck traffic that currently uses it. Moreover, the pavement surfaces on roads such as Conant Road, Burlock Road, and Marston Road are degrading because of the heavy truck weights that they were not designed to sustain. [Figure 1-2, page 1-4](#), depicts the routes that are now most commonly taken to reach the Easton industrial area from areas north and west.

1.3.1 Economic Importance of Huber and McCain

McCain's and Huber employ approximately 600 and 112 workers, respectively, at their two plants in Easton. Combined, these two firms represent nearly a third of all manufacturing employment and four percent of total non-farm wage and salary employment in the Presque Isle-Caribou Labor Market Area (LMA). In addition, the firms generate substantial demand for locally produced raw materials used in their production processes, making them two of the most economically important companies in Aroostook County.

McCain's Easton facility processes roughly 318,000 metric tons (350,000 tons) of potatoes annually, with much of the crop harvested by Aroostook County farms. McCain's recently completed a \$70.8 million expansion of its Easton facility. In August of 2000, the company announced plans to undertake a second expansion to increase production capacity by another 60%. The expansion is projected to add 200 workers and create demand for an additional 6,070 hectares (15,000 acres) of crop production. That announced expansion has since been postponed but could take place at a later date.

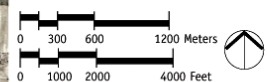
Huber operates an Oriented Strand Board (OSB) production facility in Easton. Huber is one of the nation's largest producers of specialty chemicals and engineered wood products. The company also owns and manages approximately 177,253 hectares (438,000 acres) of timberland in Maine. The type of value-added wood products manufacturing performed by Huber is a key component of the region's economy.



- Primary Access Routes during Unposted Conditions
- Primary Access Routes during Posted Conditions
- Primary Egress Routes during Unposted Conditions
- Primary Egress Routes during Posted Conditions
- Study Area
- Town Boundary
- Heavy Truck Traffic through Downtown Presque Isle
- Highways that are Typically Posted in the Spring (Trucks are Restricted)

Figure 1-2

Existing Travel Routes
to Easton Industrial Area



1.3.2 Truck Traffic to and From Easton Industrial Area

Much of the truck traffic headed for Easton from the west passes through downtown Presque Isle. Trucks approaching downtown Presque Isle from the west on Route 163 (just south of the Presque Isle Fairground) must cross Presque Isle Stream on State Street, turn right onto Main Street (Route 1 South), and then turn left onto Academy Street (Route 10) before continuing east out of town toward Easton. Trucks have difficulty using this route through the downtown area because of the presence of buildings located near the roadway, the lack of shoulders, and the presence of on-street parking that make it difficult for trucks to turn onto and off Route 1. These factors slow truck movements and disrupt traffic in the downtown area. Furthermore, residents and businesses in downtown Presque Isle complain about the noise and air quality impacts that the heavy truck traffic causes.

Trucks destined for Easton from the north generally approach on Route 1 in Presque Isle, cross the Aroostook River, turn left (east) onto Maysville Street (Route 163), pass the Aroostook Centre Mall, continue east on Route 163, turn south onto Burlock Road/Marston Road to reach Conant Road, then continue east to the intersection with Station Road. This route is circuitous, has areas of steep grades without climbing lanes, and follows steeply crowned, narrow, local residential roads with inadequate shoulders. The pavement design on Burlock Road/Marston Road was never intended to serve the large number of heavy trucks that now use them, and the roads have deteriorated rapidly under the weight of the heavy truck usage.

To limit damage to the roadways, MDOT and the City of Presque Isle typically post Conant, Burlock, and Marston Roads in the spring. These postings restrict truck weights and force trucks that exceed the posted weights to take an even more circuitous route to Easton. The routes that trucks must take when road postings block their regular route to Easton are substantially longer and add considerable time to a truck trip. [Figure 1-2, page 1-4](#), depicts the routes used during posted conditions.

For example, the trip from the Route 1 bridge over the Aroostook River in Presque Isle to the Easton industrial area is approximately 13.4 kilometers (8.4 miles) if the Burlock, Marston, Conant Road route is taken. When Conant Road is posted, and trucks must follow Route 163 to Route 1A to Richardson Road, the trip is nearly doubled to 25.7 kilometers (16 miles).

In summary, a new connector road between Routes 163/167 and Conant Road would create a shorter, faster, more direct connection to the Easton industrial area, thereby improving the movement of materials and lowering transportation costs for industries in the area. Furthermore, it would help to reduce the amount of truck traffic in downtown Presque Isle by providing a more direct route that avoids the downtown area. This would in turn help to improve traffic conditions, noise levels, and air quality in the downtown area.

1.3.3 Project Purpose and Need Statement

The **Purpose** of this project is to improve the mobility of raw materials and finished product to and from the industrial area of Easton and improve air quality, noise, and traffic operations in downtown Presque Isle by reducing the volume of trucks passing through it. Improved mobility will in turn support continued economic growth by reducing transportation costs for the those moving goods to and from Easton.

Specific elements of the **Need** for transportation improvements are:

- the lack of adequate, reliable transportation access to the industrial area of Easton from the area north and west of Presque Isle for the movement of raw materials and finished products to and from the area;
- the level of congestion caused by truck traffic through downtown Presque Isle and on local, residential streets such as Burlock Road and Marston Road; and
- the excessive amount of noise and particulate matter in downtown Presque Isle, caused by heavy truck traffic.

1.3.4 U.S. Army Corps of Engineers Basic Project Purpose

MDOT has begun coordination efforts with the U.S. Army Corps of Engineers (ACOE). The Preferred Alternative requires a Section 404 Permit for filling wetlands. The ACOE uses an avoidance, minimization, mitigation approach for review following the “New England Highway Methodology.” The first step in the methodology is to determine the “basic project purpose.” Through consultation with MDOT, the ACOE has determined the basic project purpose to be “to improve truck access to the Easton Industrial Park at Easton, Maine. Improved access should reduce truck traffic in downtown Presque Isle, improve public safety, and improve the mobility of raw materials and finished product to and from the industrial park.” Refer to Appendix A for a copy of the ACOE’s basic project purpose letter.

1.4 Other Relevant EISs/EAs

This Draft EA considers 11 build alternatives and the No-Build Alternative in its analysis. The 11 build alternatives are screened down to a Preferred Alternative. Of the 11 build alternatives initially considered, 9 were developed specifically for this study, while the remaining 2 were originally conceived as part of the Federal Highway Administration (FHWA) and MDOT’s on-going Aroostook County Transportation Study (ACTS) (FHWA-ME-EIS-01-1-D). The ACTS will culminate in the selection of potential transportation corridors from I-95 to Aroostook County and

the publication of an Environmental Impact Statement (EIS) and a Record of Decision (ROD). The ACTS Draft EIS (DEIS) is expected to be published in early 2002.

The ACTS DEIS is examining new location and upgraded highway corridors aimed at improving mobility throughout Aroostook County as a means of spurring economic growth. Two of the highway corridors being studied in the ACTS DEIS, namely Corridors Hm and Km, pass directly through this Easton Study Area. Therefore, roadways within these two corridors have been included as potential alternatives in this Draft EA.

1.5 Federal and State Decisions and Actions

This Draft EA documents the methods used to quantitatively evaluate a range of potential alternatives to determine which best meets the Project's Purpose and Need. Potential environmental impacts and mitigation measures are presented for the Preferred Alternative, using the No-Build Alternative as a baseline.

This Draft EA provides the FHWA with the information required to make a determination as to whether the Preferred Alternative would have a significant impact on the human and social environment. Following completion of the Final EA, the FHWA will prepare a report documenting the expected impacts of the Preferred Alternative. This Draft EA also provides the MDOT with the decision-making tool required by the Maine Sensible Transportation Policy Act (STPA).

1.6 Scope of this Environmental Analysis

MDOT has consulted with federal and state resource agencies, the affected municipalities, and the public regarding issues of potential impact and concern. Issues that were of most concern fall into the following general categories:

- transportation – including truck traffic in downtown Presque Isle and on the roads to and from Easton;
- impacts to residences and businesses, *i.e.*, relocations;
- farmland and disruption of farm operations;
- utility impacts;
- wetlands and waterfowl habitat - in particular the Christina Reservoir;
- floodplain impacts; and
- air quality and noise impacts.

Other issues that have been found not relevant to this study, because they are not present, or if present, would not be affected by the proposed project are only briefly discussed in this Draft EA. These include the following:

- impacts to community facilities;
- impacts to historic and archaeological resources;

- impacts to public recreation and conservation lands (Section 4(f) resources);
- hazardous materials;
- impacts to soils and physical geography;
- impacts to surface and groundwater drinking water supplies; and
- Threatened and Endangered Species.

1.7 Applicable Regulations, Required Coordination, and Permits

Federal and state statutes and regulations require interagency and public coordination during the preparation and review of an EA. In addition, MDOT must obtain a number of permits and approvals prior to construction of the Preferred Alternative.

Federal statutes and regulations promulgated pursuant to the statutes that are applicable to this study include the following:

- National Environmental Policy Act of 1969 (NEPA) as amended, and regulations found at 40 CFR 1500-1508 and the FHWA NEPA regulations at 23 CFR 771
- Sections 401 and 404 of the Clean Water Act, as regulated by the U.S. Army Corps of Engineers (ACOE) through 33 U.S.C. 1251-1376
- Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303 and 23 U.S.C. 138 and FHWA's Environmental Impact and Related Procedures at 23 CFR 771.
- Section 6(f) of the Land and Water Conservation Fund Act of 1965, 16 U.S.C. 460
- Section 106 of the National Historic Preservation Act of 1966
- Endangered Species Act, as regulated at 50 CFR 17
- Executive Order 11990, Protection of Wetlands, May 24, 1977
- Executive Order 11988, Protection of Floodplains, May 24, 1977
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, February 11, 1994
- National Pollutant Discharge Elimination System (NPDES) Permit - General Permit for Stormwater Discharges from Construction Sites from the U.S. Environmental Protection Agency (33 U.S.C. 1342)
- Uniform Relocation Assistance and Real Property Act of 1970, 42 U.S.C. 61.

State statutes and regulations that are applicable to the proposed action include:

- Maine Department of Environmental Protection (MDEP), Natural Resources Protection Act, (38 M.R.S.A., section 480-A to 480-Z) (NRPA)
- MDEP, Erosion and Sedimentation Control Law (38 M.R.S.A., section 420-C)

- MDEP, Storm Water Management Law (38 M.R.S.A., section 420-D)

Table 1-1 lists the permits and certifications expected to be associated with construction of the Preferred Alternative.

Table 1-1
Environmental Permits Expected to be Required for the Preferred Alternative

Agency		Permit/Consultation	Status
MDEP	NRPA Permit		Application not yet filed
MDEP	Stormwater Permit		Application not yet filed
MDEP	Section 401 Water Quality Certification (issued with NRPA)		Application not yet filed
ACOE	Section 404, Category I Programmatic General Permit		Application not yet filed

Alternatives

2.1 Overview of Alternative Selection Process

A range of potential Alternatives connecting Station Road with Route 163/167 were identified to address the Project Purpose and Need. Eleven initial alternatives were developed for study. A preliminary screening based on how well the alternatives addressed the Project's Purpose and Need was used to narrow the 11 alternatives down to six. A final screening that examined the cost and major environmental impacts was then used to select a Preferred Alternative. This Draft EA presents expected impacts from the Preferred Alternative and the No-Build Alternative.

2.2 Maine Sensible Transportation Policy Act

The Maine Sensible Transportation Policy Act (STPA) (23 M.R.S.A. § 73) was enacted in 1991. It provides a decision making framework for examining a range of transportation alternatives. The STPA requires the MDOT to "evaluate the full range of reasonable transportation alternatives for significant highway construction or reconstruction projects." The intent of the STPA is to ensure that all reasonable transportation alternatives are given full consideration. The STPA also ensures a public process for all significant highway projects or projects that are of substantial public interest.

Reasonable alternatives are defined as alternatives "which adequately respond to the identified deficiency or need in the transportation network, are cost effective, and are capable of being implemented within a reasonable time period necessary to meet the transportation deficiency or need." Regulations (CMR 103 Section 3.J) specify that the alternatives to be evaluated include:

- New facilities or services;
- Transportation system management (TSM) alternatives;
- Transportation demand management (TDM) alternatives;
- Improvement to existing facilities;
- A No-Build Alternative; and

- Other reasonable alternatives generated through the public participation process.

TSM and TDM alternatives generally consist of low cost measures that increase system efficiency without physically adding capacity in terms of adding lanes to an existing facility or providing a new location roadway. TSM measures typically include system improvements such as traffic signal timing or phasing adjustments, access management improvements, and improved signage or pavement markings. TDM measures are demand management strategies intended to reduce single occupant automobile travel and increase transit use. TDM measures can include ridesharing/carpooling programs, trip-reduction incentives, and congestion pricing.

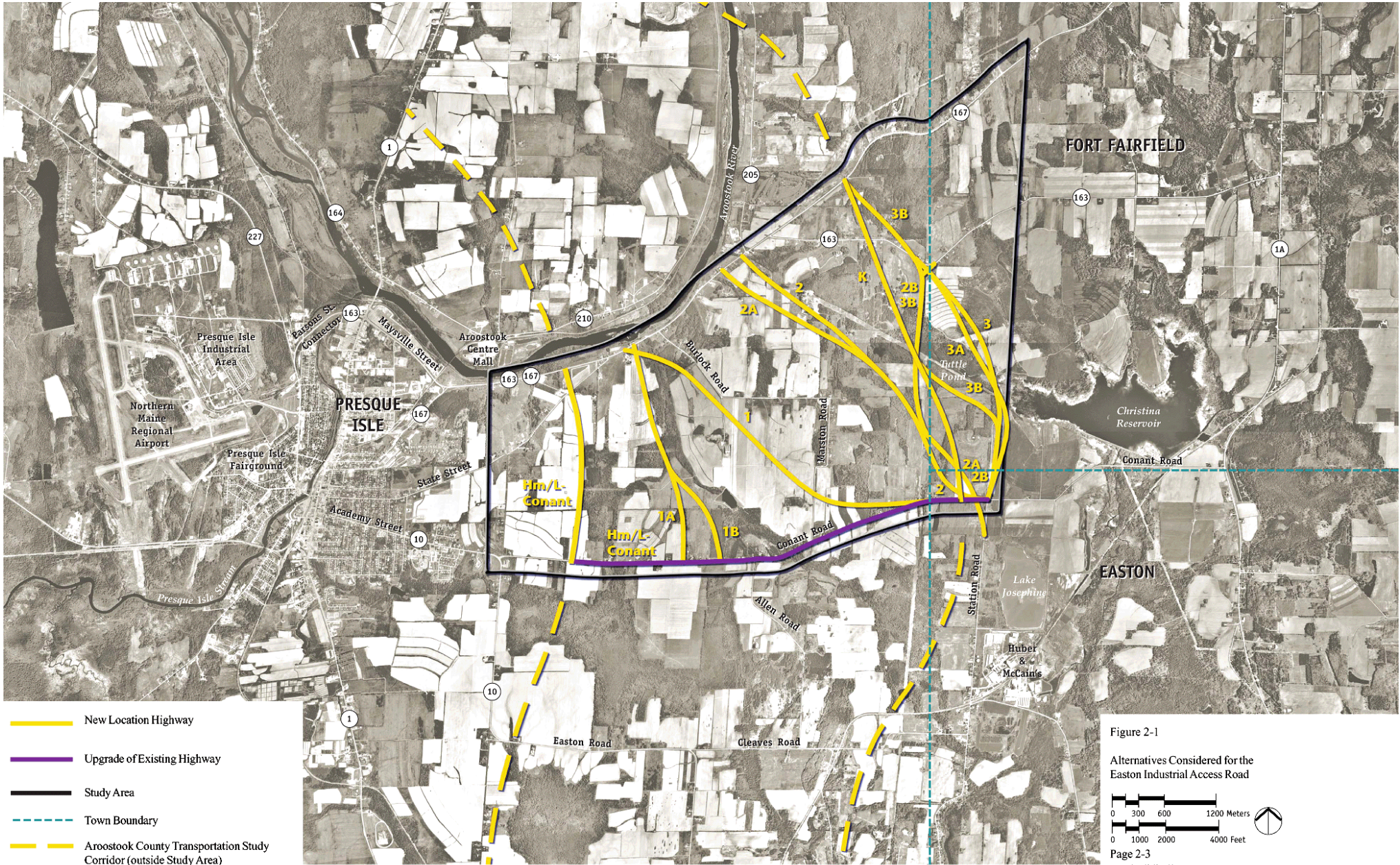
In the context of this study, TSM and TDM options do not fully address the needs defined. TSM and TDM strategies would not alone improve mobility of raw materials and finished product to and from the Easton industrial area nor will they address the human environment issue of through commercial truck traffic in downtown Presque Isle. For these reasons, TSM and TDM actions have been dismissed as stand-alone alternatives.

The alternatives studied in this Draft EA include new location roadways, upgrades of existing roadways, and a No-Build Alternative. The alternatives studied meet many of the MDOT's policy objectives set forth in the STPA (Subchapter 1 Section 4B). The Preferred Alternative would:

- Promote the coordinated and efficient use of all available and future modes of transportation;
- Provide a necessary link in the system providing a safer, more efficient transportation network;
- Help to minimize the harmful effects of transportation on public health, air and water quality, land use, and other natural resources; and
- Be consistent with the local comprehensive planning process.

2.3 Alternatives Screening

An alternatives screening analysis has been performed to select a Preferred Alternative for the new roadway that would best meet the Study's Purpose and Need. A total of 11 alternatives (not including the No-Build Alternative) were considered. The 11 alternatives are depicted on [Figure 2-1, page 2-3](#).



The alternative screening process involved a two-stage approach, *preliminary screening* and *final screening*. The *preliminary screening* step involved analyzing the 11 initial alternatives to determine their transportation benefits as they relate to the Study's Purpose and Need (*i.e.*, how well they improve mobility to and from the industrial area of Easton and how effectively they reroute traffic out of downtown Presque Isle). The top performing alternatives were carried forward to the *final screening* step, where factors such as social and environmental impacts, feasibility, and cost were quantified and used as the rationale to select a Preferred Alternative.

This Draft EA focuses on the benefits and impacts of the Preferred Alternative and the No-Build Alternative.

2.3.1 Alternatives Considered

No-Build Alternative

Under the No-Build Alternative, no new roadway construction or major upgrades to existing roadways would occur. MDOT and the local municipalities would continue to perform on-going maintenance activities for existing facilities.

Alternative 1

Alternative 1 is approximately 5.1 kilometers (3.2 miles) long, beginning at Conant Road approximately 609 meters (2,000 feet) west of Station Road, and connecting to Route 163/167 just east of the intersection of State Street. This alternative was included in this Draft EA because it would provide a fairly direct route between Station Road and Route 163/167 that would bypass much of Conant Road. This alternative would pass through the middle of a large, active potato farm (Lagerfeld Farm) and intersect Marston Road.

Approximately 884 meters (2,900 feet) of Conant Road between the terminus of the new location roadway and Station Road would be rebuilt and upgraded as part of this alternative. Because of the topography of the area, approximately 914 meters (3,000 feet) of this road would require an auxiliary lane to accommodate heavy trucks.

Alternative 1A

Alternative 1A is a variation of Alternative 1. It is approximately 2.7 kilometers (1.7 miles) long and connects Conant Road approximately 829 meters (2,720 feet) west of its intersection with Allen Road with Route 163/167 between State Street and Burlock Road. Alternative 1A was developed because it was seen as having less potential impact to active farmland than Alternative 1.

A 3.5-kilometer (2.2-mile) segment of Conant Road between the terminus of the new location roadway and Station Road would be rebuilt and upgraded as part of this alternative. This upgraded portion of Conant Road would include auxiliary lanes for approximately 1.6 kilometers (1.0 mile) because of the topography of Conant Road.

Alternative 1B

Alternative 1B is another variation of Alternative 1 developed to reduce potential impacts to farmland. It is approximately 2.9 kilometers (1.8 miles) long and connects Conant Road 780 meters (2,560 feet) west of Allen Road with Route 163/167 between State Street and Burlock Road.

A 3.3-kilometer (2.0-mile) segment of Conant Road located between the terminus of the new location roadway and Station Road would be rebuilt and upgraded as part of this alternative. This upgraded portion of Conant Road would include auxiliary lanes for approximately 1.2 kilometers (0.7 miles) because of the topography of Conant Road.

Alternative 2

Alternative 2 was developed as an alternative that would address the Purpose and Need while largely avoiding impacts to active farmland. Alternative 2 is approximately 4.3 kilometers (2.7 miles) long. It connects Conant Road near its intersection with Station Road to Route 163/167 just south of its intersection with Route 205. A portion of this alternative crosses the southeast corner of the town of Fort Fairfield. This alternative would not require an upgrade of Conant Road. Because of topography, approximately 1,370 meters (4,500 feet) of Alternative 2 would require an auxiliary lane along the new location roadway.

Alternative 2A

Alternative 2A is a slight variation of Alternative 2, designed to reduce the potential wetland impacts associated with Alternative 2. This alternative diverges from the alignment of Alternative 2 to intersect with Route 163/167 farther to the west. Alternative 2A is approximately 4.7 kilometers (2.9 miles) long. This alternative would not require an upgrade of Conant Road. Because of topography, approximately 1,370 meters (4,500 feet) of Alternative 2A would require an auxiliary lane along the new location roadway.

Alternative 2B

Alternative 2B is approximately 3.4 kilometers (2.1 miles) long and connects Conant Road with Route 163 just west of the Fort Fairfield/Presque Isle town line. This alternative was conceived as a relatively short alternative that would require less new roadway construction than Alternatives 2 and 2A. A

disadvantage to this alternative would be that, because it terminates at Route 163, trucks would still need to negotiate the steep hill on Route 163 east of the Route 163/Route 167 intersection (known locally as “Chicken Hill”). This alternative would not require an upgrade of Conant Road. Because of topography, approximately 914 meters (3,000 feet) of Alternative 2B would require an auxiliary lane along the new location roadway.

Alternative 3

Alternative 3 is approximately 2.9 kilometers (1.8 miles) long and connects Conant Road to Route 163 just east of the Fort Fairfield/Presque Isle town line. It passes just west of Christina Reservoir. Alternative 3 is located entirely on land owned by McCain’s. This is an advantage because McCain’s has expressed a willingness to donate the necessary right-of-way, thereby eliminating land acquisition costs. A disadvantage of Alternative 3 is that, similar to Alternative 2B, trucks would still need to negotiate the steep hill on Route 163 just east of the Route 163/Route 167 intersection. It would also impact the Christina Reservoir, a State-designated area of “Significant Wildlife Habitat.” This alternative would not require an upgrade of Conant Road. Because of steep topography, approximately 914 meters (3,000 feet) of Alternative 3 would require an auxiliary lane along the new location roadway.

Alternative 3A

Alternative 3A represents a minor variation of Alternative 3 designed to minimize potential impacts to Christina Reservoir. It is located slightly farther to the east than Alternative 3 in the area south of Christina Reservoir and slightly farther to the west north of the reservoir. The termini of Alternative 3A are identical to Alternative 3. Alternative 3A, like Alternative 3, would require a 914-meter (3,000-foot) auxiliary lane. As with Alternative 3, a disadvantage to Alternative 3A is that trucks would still need to negotiate the steep hill on Route 163 east of the Route 163/Route 167 intersection.

Alternative 3B

Alternative 3B is approximately 4.2 kilometers (2.6 miles) long. It follows the same alignment as Alternative 3A, but would continue on the north side of Route 163 and intersect Route 167 approximately 1.1 kilometers (0.7 miles) north of its intersection with Route 163. Alternative 3B, like Alternatives 3 and 3A, would require a 914-meter (3,000-foot) auxiliary lane.

Alternative Km

This alternative follows a portion of “Corridor Km” identified in the ACTS DEIS. It is approximately 3.9 kilometers (2.4 miles) long. Similar to Alternative 3B, this

alternative would intersect Route 163, continue north, and terminate at Route 167. Since it would intersect Conant Road very near its intersection with Station Road, an upgrade of Conant Road would not necessarily be required. Alternative Km would require a 914-meter (3,000-foot) auxiliary lane along the new location roadway because of topography.

Alternative Hm/L-Conant (Preferred Corridor)

Alternative Hm/L-Conant is a 2.2-kilometer (1.4-mile) new location roadway linking Conant Road with Route 163/167. Alternative Hm/L-Conant also includes an upgrade of Conant Road for approximately 5.1 kilometers (3.2 miles). The new location roadway segment would follow an overlapping segment of Corridors Hm and L identified in the ACTS DEIS and would complement potential future transportation actions that may arise out of the ACTS. However, Hm/L-Conant, the Preferred Alternative, has independent utility from the Corridors proposed in the ACTS. Alternative Hm/L-Conant has logical termini and will address an existing transportation need. Construction of the Preferred Alternative would provide immediate benefit to the Presque Isle/Easton transportation system by improving safety, access, and mobility for materials and finished product.

Auxiliary lanes would be needed on the new location roadway for approximately 700 meters (2,300 feet) and on the upgraded portion of Conant Road for approximately 914 meters (3,000 feet) because of topography. Alternative Hm/L-Conant would promote the use of the existing infrastructure on Maysville Street which was constructed to accommodate heavy truck traffic and provide direct access to the Parsons Street Connector on the west side of Route 1, north of downtown Presque Isle.

Table 2-1 on page 2-8 summarizes the Alternatives.

Table 2-1
Alternatives Considered

Alternative	Length of New Location Roadway		Southern Terminus Conant Road -	Northern Terminus	Conant Road Upgrade	Comments
	Kilometers	Miles				
1	5.1	3.2	609 m west of Station Road	Route 163/167	Yes	Bisects large, active potato farm.
1A	2.7	1.7	829 m west of Allen Road	Route 163/167	Yes	Requires auxiliary lanes on Conant Road.
1B	2.9	1.8	780 m west of Allen Road	Route 163/167	Yes	Requires auxiliary lanes on Conant Road.
2	4.3	2.7	Just west of Station Road	Route 163/167	No	Requires auxiliary lanes on new roadway.
2A	4.7	2.9	Just west of Station Road	Route 163/167	No	Requires auxiliary lanes on new roadway.
2B	3.4	2.1	At Station Road	Route 163	No	Requires use of steep hill on Route 163. Requires auxiliary lanes on new roadway.
3	2.9	1.8	At Station Road	Route 163	No	Entirely on land owned by McCain's. Passes through Christina Reservoir Significant Wildlife Habitat. Requires use of steep hill on Route 163. Requires auxiliary lanes on new roadway.
3A	2.9	1.8	At Station Road	Route 163	No	Requires use of steep hill on Route 163. Requires auxiliary lanes on new roadway.
3B	4.2	2.6	At Station Road	Route 167	No	Requires auxiliary lanes on new roadway.
Km	3.9	2.4	Just west of Station Road	Route 167	No	Uses ACTS DEIS Corridor. Requires auxiliary lanes on new roadway.
Hm/L-Conant	2.2	1.4	5.1 kilometers west of Station Road	Route 163/167	Yes	Uses ACTS DEIS Corridor. Requires auxiliary lanes on new Roadway and on Conant Road.
No-Build	N/A	N/A	N/A	N/A	No	Would not address Purpose and Need

m = meters

2.3.2 Preliminary Screening

The preliminary screening of how well the alternatives meet the Study's Purpose and Need was based on a travel demand forecasted to the year 2023. This forecast represents a 20-year planning horizon after the design year of the Preferred Alternative, expected to be 2003.

The travel forecast was performed using a three-step process. First, in July 2001, an extensive data collection program, consisting of 24-hour automated traffic recorders (ATRs) and peak hour turning movement counts (TMCs), was conducted at locations throughout the Study Area. Second, the data were

adjusted to account for seasonal fluctuations to arrive at a 2001 baseline condition. Finally, a model growth rate, which was determined using the Aroostook County Regional Travel Demand Model, was applied to the 2001 baseline condition to arrive at a 2023 future condition.

Once the 2023 forecast was complete, the alternatives' potential traffic effects were determined. The measures that were used to determine each alternative's ability to meet the Study's Purpose and Need included:

- Travel demand;
- Truck demand shifts from downtown Presque Isle;
- Truck demand shifts from deficient roadway segments, such as Conant Road;
- Annual vehicle-miles traveled (VMT) savings; and
- Annual vehicle-hours traveled (VHT) savings.

2.3.2.1 Travel Demand Shifts

Travel demand shifts for each of the alternatives were determined primarily using survey data from McCain's and Huber, along with origin-destination data collected by the MDOT for the Maysville Connector Road Feasibility Study.¹ The survey data were collected by MDOT in February 2001 and included origin/destination and trip generation data for McCain's Foods and Huber (the survey included estimated traffic increases from the potential McCain's expansion).

Tables 2-2 through Table 2-7 summarize the results for each alternative compared to the 2023 No-Build Alternative. More detailed information on how these factors were determined is provided in Appendix B.

Table 2-2, page 2-10, presents the projected travel demand for each of the alternatives. The alternatives are expected to carry between 1,060 and 1,320 vehicles per day. Truck demands vary from 220 to 280 trucks per day and are drawn predominantly from Route 1 through downtown Presque Isle, Conant Road, and Burlock Road and Marston Road. These truck trips consist mostly of trips to and from the McCain's and Huber facilities.

As indicated in Table 2-2, Alternatives 2B, 3, 3A, 3B, and Km are expected to attract less demand than Alternatives 1, 1A, 1B, 2, 2A, and Hm/L-Conant. This decrease in projected demand for Alternatives 2B, 3, 3A, 3B, and Km is because they are farther east, and motorists are more likely to choose to continue using the shorter routes through downtown Presque Isle and Burlock Road despite the difficulties associated with those routes.



¹ *Presque Isle Maysville Connector Road Feasibility Study*; Maine Department of Transportation; 1988.

Table 2-2
2023 Forecasted Demand for the Alternatives¹

	Non-Truck Demand (vpd)	Truck Demand (vpd)	Total Demand (vpd)
Alternative 1	1,040	280	1,320
Alternative 1A	1,040	280	1,320
Alternative 1B	1,040	280	1,320
Alternative 2	1,040	280	1,320
Alternative 2A	1,040	280	1,320
Alternative 2B	840	220	1,060
Alternative 3	840	220	1,060
Alternative 3A	840	220	1,060
Alternative 3B	840	220	1,060
Alternative Km	840	220	1,060
Alternative Hm/L-Conant	1,040	280	1,320

¹ Volumes shown are Annual Average Daily Traffic (AADT) for 2023 conditions on the new road, expressed in vehicles per day (vpd)

Table 2-3, page 2-12, summarizes the demand shifts through downtown Presque Isle, Burlock Road/Marston Road, and Conant Road.

Route 1 (Main Street) in downtown Presque Isle is projected to carry approximately 18,000 vehicles per day under 2023 conditions. Of these, 2,100 are trucks (12 percent). For all vehicles (including trucks), the alternatives are projected to shift between 830 and 890 vehicles per day (vpd) away from downtown Presque Isle. This represents decreases of approximately 5 percent. Heavy truck demands through the downtown are expected to decrease by between 180 (9 percent) and 240 (11 percent) trucks per day. This indicates that of the heavy trucks through downtown Presque Isle, approximately 11 percent are estimated to be to/from the industrial area of Easton.

Burlock Road carries approximately 1,000 vpd under 2023 conditions. Of these, 100 are heavy trucks (10 percent). Daily demands on Burlock Road and Marston Road are expected to decrease by between 240 vpd (24 percent) and 430 vpd (43 percent). Truck demands on Burlock and Marston Roads are expected to decrease by 40 percent (40 trucks per day).

Conant Road would carry approximately 1,500 vehicles under 2023 conditions. Of these, 200 are heavy trucks (13 percent). Conant Road demands are expected to decrease by between 500 vpd (33 percent) and 540 vpd (36 percent). Truck demands on Conant Road are expected to decrease by between 50 and 70 percent (100 to 140 trucks per day).

As shown in Table 2-3, page 2-12, Alternatives 1, 1A, 1B, 2, 2A, and Hm/L-Conant provide higher traffic demand shifts than Alternatives 2B, 3, 3A, 3B, and Km.

Table 2-3
2023 Forecasted Demand Shifts¹

	Downtown Presque Isle Route 1 (Main Street) between Route 227 and Academy Street						Burlock Road/Marston Road South of Route 163/167						Conant Road Between Route 10 and Marston Road					
	Non-Trucks		Trucks		Total		Non-Trucks		Trucks		Total		Non-Trucks		Trucks		Total	
	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)	(vpd)	(%)
No-Build Alternative 2023 Volume ²	15,900	--	2,100	--	18,000	--	900	--	100	--	1,000	--	1,300	--	200	--	1,500	--
Alternative 1 ³	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative 1A	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative 1B	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative 2	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative 2A	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative 2B	-650	-4%	-180	-9%	-830	-5%	-200	-22%	-40	-40%	-240	-24%	-400	-31%	-100	-50%	-500	-33%
Alternative 3	-650	-4%	-180	-9%	-830	-5%	-200	-22%	-40	-40%	-240	-24%	-400	-31%	-100	-50%	-500	-33%
Alternative 3A	-650	-4%	-180	-9%	-830	-5%	-200	-22%	-40	-40%	-240	-24%	-400	-31%	-100	-50%	-500	-33%
Alternative 3B	-650	-4%	-180	-9%	-830	-5%	-200	-22%	-40	-40%	-240	-24%	-400	-31%	-100	-50%	-500	-33%
Alternative Hm/L-Conant	-650	-4%	-240	-11%	-890	-5%	-390	-43%	-40	-40%	-430	-43%	-400	-31%	-140	-70%	-540	-36%
Alternative Km	-650	-4%	-180	-9%	-830	-5%	-200	-22%	-40	-40%	-240	-24%	-400	-31%	-100	-50%	-500	-33%

1 Volumes shown are Annual Average Daily Traffic (AADT) for 2023 conditions, expressed in vehicles per day (vpd)

2 Forecast AADT for total vehicles for the No-Build Alternative

3 Change in AADT for total vehicles compared to the No-Build Alternative.

2.3.2.2 Travel Time Savings

Table 2-4, page 2-14, presents the estimated travel time savings for each alternative compared to existing travel paths. Travel time savings are determined by comparing estimated trip times on existing travel routes to trip times from each alternative.

Trips between the Route 1 (Main Street)/Maysville Street intersection and Station Road currently take approximately 12 minutes if the Maysville Street to Burlock Road/Marston Road travel path is used, and 14 minutes if the downtown Presque Isle travel path is used. The time savings from Main Street/Maysville Street to Station Road compared to the existing route through downtown Presque Isle are as follows (from most time savings to least time savings):

- Alternative 1 and Alternative Hm/L-Conant - 6 minutes (43 percent);
- Alternatives 1A, 1B, 2, 2A - 5 minutes (36 percent); and
- Alternatives 2B, 3, 3A, 3B, Km - 3 minutes (21 percent).

Trips between the Presque Isle Industrial Park and Station Road currently take approximately 13 minutes if the Maysville Street to Burlock Road/Marston Road travel path is used, and 11 minutes if the downtown Presque Isle travel route is used. The time savings from the Presque Isle Industrial Park to Station Road compared to the existing route on Maysville Street to Burlock Road/Marston Road are as follows (from most time savings to least time savings):

- Alternative 1, Hm/L-Conant - 4 minutes (31 percent);
- Alternatives 1A, 1B, 2, 2A - 3 minutes (23 percent); and
- Alternatives 2B, 3, 3A, 3B, Km - 1 minute (8 percent).

For trips between the Presque Isle Industrial Park and Station Road via downtown Presque Isle, the travel time savings are lower with several alternatives actually resulting in a longer travel time. Alternatives 2B, 3, 3A, 3B, and Km do not save time for trips between the industrial park and Station Road compared to existing routes through downtown Presque Isle (as indicated by the negative values in Table 2-4, page 2-14).

Taking an average of the four travel routes, Alternative 1 and Hm/L-Conant would provide the greatest travel time savings (4 minutes, 31 percent). Alternatives 1A, 1B, 2, and 2A would result in average time savings of 3 minutes (23 percent). Alternatives 2B, 3, 3A, 3B, and Km would provide the lowest average travel time savings, approximately 1 minute (8 percent).

Table 2-4
Travel Time Savings (Minutes)

No-Build Alternative	Between Main Street/ Maysville Street and Conant Road/Station Road				Between Presque Isle Industrial Park and Conant Road/ Station Road				AVERAGE	
	Travel Time Via Maysville Street to Burlock Road /Marston Road		Travel Time Via Downtown Presque Isle to Academy Street		Travel Time Via Maysville Street to Burlock Road / Marston Road		Travel Time Via Downtown Presque Isle to Academy Street			
	12 min.		14 min.		13 min.		11 min.			
	Savings (min)	% Change	Savings (min)	% Change	Savings (min)	% Change	Savings (min)	% Change	Savings (min)	% Change
	Alternative 1	4	33%	6	43%	4	31%	2	18%	4
Alternative 1A	3	25%	5	36%	3	23%	1	9%	3	23%
Alternative 1B	3	25%	5	36%	3	23%	1	9%	3	23%
Alternative 2	3	25%	5	36%	3	23%	1	9%	3	23%
Alternative 2A	3	25%	5	36%	3	23%	1	9%	3	23%
Alternative 2B	1	8%	3	21%	1	8%	-1	-9%	1	8%
Alternative 3	1	8%	3	21%	1	8%	-1	-9%	1	8%
Alternative 3A	1	8%	3	21%	1	8%	-1	-9%	1	8%
Alternative 3B	1	8%	3	21%	1	8%	-1	-9%	1	8%
Alternative Km	1	8%	3	21%	1	8%	-1	-9%	1	8%
Alternative Hm/L-Conant	4	33%	6	43%	4	31%	2	18%	4	31%

Note: Positive values indicate a shorter travel time and negative values indicate a longer travel time.

2.3.2.3 Travel Distance Savings

Table 2-5, page 2-15, summarizes the travel distance savings for the proposed alternatives. Some alternatives result in longer travel paths indicated by negative values in Table 2-5. The overall travel distance savings are minimal and do not exceed 1.3 kilometers (0.8 miles) for any alternative. None of the alternatives would save trip distances between the Presque Isle Industrial Park and Conant Road/Station Road (as indicated by the negative values in Table 2-5).

It should be noted that during the time of the year when Conant Road and/or Burlock and Marston Road are posted, the travel distance savings increase substantially. For example, the trip from Main Street/Maysville Street to Conant Road/ Station Road by way of Burlock Road and Marston Road is approximately 6.3 miles (10.1 kilometers). With postings in place on Burlock Road and Marston Road, the trip increases to 17.7 kilometers (11.0 miles) by way of Route 163 to Route 1A. Similarly, the trip from Main Street/Maysville Street to Conant Road/Station Road by way of downtown Presque Isle to Academy Street/Conant Road is approximately 10.8 kilometers (6.7 miles). As discussed in

Chapter 1, with spring weight postings in place on Conant Road, the trip would increase to 17.4 kilometers (10.8 miles) by way of Route 10 to Station Road. These postings occur in the spring and typically last up to two months.

Table 2-5
Travel Distance Savings

	Between Main Street/ Maysville Street and Conant Road/Station Road						Between Presque Isle Industrial Park and Conant Road/ Station Road					
	via Maysville Street to Burlock Road/Marston Road			via Downtown Presque Isle to Academy Street			via Maysville Street to Burlock Road/Marston Road			via Downtown Presque Isle to Academy Street		
	Km	Miles	% Change	Km	Miles	% Change	Km	Miles	% Change	Km	Miles	% Change
Existing Travel Distance	10.1	6.3	--	10.8	6.7	--	11.3	7.0	--	10.0	6.2	--
Travel Distance Savings (positive values indicate a shorter travel distance)												
Alternative 1	+ 0.3	+ 0.2	+3%	+ 1.0	+ 0.6	+9%	+ 0.3	+ 0.2	+3%	- 1.1	- 0.7	-11%
Alternative 1A	- 0.2	- 0.1	-2%	+ 0.6	+ 0.4	+6%	- 0.2	- 0.1	-1%	- 1.4	- 0.9	-15%
Alternative 1B	+ 0.2	+ 0.1	+2%	+ 1.0	+ 0.6	+9%	+ 0.2	+ 0.1	+1%	- 1.1	- 0.7	-11%
Alternative 2	+ 0.5	+ 0.3	+5%	+ 1.3	+ 0.8	+12%	+ 0.5	+ 0.3	+4%	- 0.8	- 0.5	-8%
Alternative 2A	+ 0.5	+ 0.3	+5%	+ 1.3	+ 0.8	+12%	+ 0.5	+ 0.3	+4%	- 1.0	- 0.6	-10%
Alternative 2B	- 1.0	- 0.6	-10%	- 0.2	- 0.1	-1%	- 1.0	- 0.6	-9%	- 2.3	- 1.4	-23%
Alternative 3	- 0.8	- 0.5	-8%	0	0	0%	- 0.8	- 0.5	-7%	- 2.1	- 1.3	-21%
Alternative 3A	- 0.8	- 0.5	-8%	0	0	0%	- 0.8	- 0.5	-7%	- 2.1	- 1.3	-21%
Alternative 3B	- 1.6	- 1.0	-16%	- 1.0	- 0.6	-9%	- 1.6	- 1.0	-14%	- 3.1	- 1.9	-31%
Alternative Hm/L-Conant	+ 0.3	+ 0.2	+3%	+ 1.1	+ 0.7	+10%	+ 0.3	+ 0.2	+3%	- 1.1	- 0.7	-11%
Alternative Km	- 1.0	- 0.6	-10%	- 0.2	- 0.1	-1%	- 1.0	- 0.6	-9%	- 2.3	- 1.4	-23%

Note: Positive values indicate shorter trip distances, negative values indicate longer trip distances.

2.3.2.4 VMT/VHT Savings

Travel-time savings, travel-distance savings, and traffic demand shifts were used to determine VMT and VHT savings for 2023 conditions. Tables 2-6, page 2-16, and 2-7, page 2-17, summarize the VMT and VHT savings for each alternative.

These VMT and VHT savings estimates assume that no road postings are in place. In actuality, spring road postings lasting up to two months result in longer trips for overweight trucks under existing conditions. The truck VMT and VHT savings would increase substantially during months of postings because the proposed alternatives eliminate the need for travel on Conant Road, and Burlock Road and Marston Road.

Table 2-6
2023 Annual Vehicle-Miles Traveled (VMT) Change

	Non-Truck			Truck			Total		
	VKT	VMT	% Change ^[1]	VKT	VMT	% Change	VKT	VMT	% Change
	Vehicle-Km	Vehicle-Miles		Vehicle-Km	Vehicle-Miles		Vehicle-Km	Vehicle-Miles	
Alternatives that Result in Shorter Trip Distances (Negative VMT Difference)									
Alternative 1	-124,100	-77,100	-6%	-23,700	-14,700	-4%	-147,800	-91,800	-5%
Alternative 1A	-59,700	-37,100	-3%	-5,300	-3,300	-1%	-65,000	-40,400	-2%
Alternative 1B	-113,100	-70,300	-5%	-20,600	-12,800	-3%	-133,700	-83,100	-5%
Alternative 2	-177,600	-110,400	-8%	-38,800	-24,100	-6%	-216,400	-134,500	-8%
Alternative 2A	-166,500	-103,500	-8%	-35,900	-22,300	-6%	-202,400	-125,800	-7%
Alternative Hm/L- Conant	-130,300	-81,000	-6%	-25,400	-15,800	-4%	-155,700	-96,800	-6%
Alternatives that Result in Longer Trip Distances (Positive VMT Difference)									
Alternative 2B	+106,800	+66,400	+5%	+42,300	+26,300	+7%	+149,100	+92,700	+5%
Alternative 3	+76,900	+47,800	+4%	+34,100	+21,200	+6%	+111,000	+69,000	+4%
Alternative 3A	+64,400	+40,000	+3%	+30,600	+19,000	+5%	+95,000	+59,000	+3%
Alternative 3B	+249,900	+155,300	+12%	+83,300	+51,800	+14%	+333,200	+207,100	+12%
Alternative Km	+106,800	+66,400	+5%	+42,300	+26,300	+7%	+149,100	+92,700	+5%

Note: Positive values denote increases in VMT (longer trip distances). Negative values denote decreases in VMT (shorter trip distances).

VMT/VKT – Annual Vehicle-Miles Traveled/Vehicle-Kilometers Traveled

[1] The percent change in VMT in the Study Area for trips that are diverted to the alternatives.

As indicated in Table 2-6, page 2-16, several alternatives (Alternatives 2B, 3, 3A, 3B, and Km) would result in increased VMT. Alternatives 2B, 3, 3A, 3B, and Km would increase VMT because, although the travel time may be faster than current routes, the travel routes are longer for these alternatives. The VMT increases for these alternatives range from 59,000 annual vehicle-miles (3 percent) for Alternative 3A to 207,100 annual vehicle-miles (12 percent) for Alternative 3B.

Conversely, Alternatives 1, 1A, 1B, 2, 2A and Hm/L-Conant would decrease VMT, indicating that these alternatives provide both a quicker and shorter route when all demand shifts are considered. Alternative 2 and 2A would have the greatest VMT savings. Alternative 2 is estimated to save 134,500 annual vehicle-miles (8 percent) and Alternative 2A would save 125,800 annual vehicle-miles (7 percent).

Table 2-7
2023 Annual Vehicle-Hours Traveled (VHT) Savings

	Non-Truck		Truck		Total	
	VHT	% Change ^[1]	VHT	% Change	VHT	% Change
	Vehicle-Hours		Vehicle-Hours		Vehicle-Hours	
Alternative 1	16,300	38%	5,500	37%	21,800	38%
Alternative 1A	13,000	31%	4,400	30%	17,400	30%
Alternative 1B	13,000	31%	4,400	30%	17,400	30%
Alternative 2	13,000	31%	4,400	30%	17,400	30%
Alternative 2A	13,000	31%	4,400	30%	17,400	30%
Alternative 2B	6,500	15%	2,200	15%	8,700	15%
Alternative 3	6,500	15%	2,200	15%	8,700	15%
Alternative 3A	6,500	15%	2,200	15%	8,700	15%
Alternative 3B	6,500	15%	2,200	15%	8,700	15%
Alternative Hm/L- Conant	16,300	38%	5,500	37%	21,800	38%
Alternative Km	6,500	15%	2,200	15%	8,700	15%

Note: Positive values denote VHT savings (shorter trip times).

[1] The percent change in VHT in the Study Area for trips that are diverted to the alternatives.

As indicated in Table 2-7, all of the alternatives would result in annual VHT savings, ranging from 8,700 to 21,800 vehicle-hours (15 percent to 38 percent). For trucks, annual VHT savings vary from 2,200 to 5,500 vehicle-hours (15 percent to 37 percent). This indicates that when all demand shifts to the alternative are considered, each alternative would provide quicker travel routes. Alternatives 1 and Hm/L-Conant would provide the greatest VHT savings. VHT savings are an important factor

because it is an indication of potential economic benefits through reduced travel times to businesses and industries in the area.

2.3.2.5 Summary of Preliminary Screening

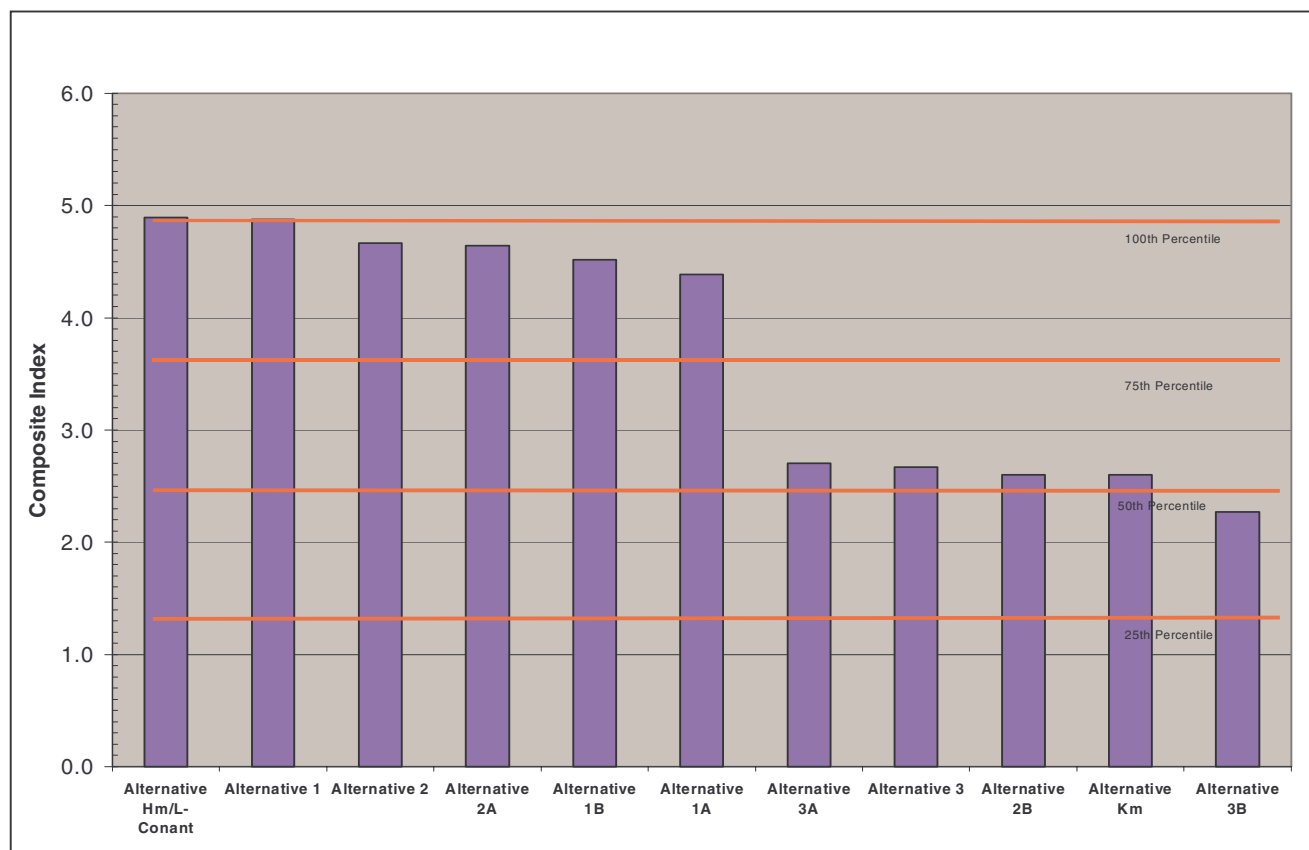
To graphically depict how the alternatives compare to each other with respect to addressing the Study's Purpose and Need, an index of the evaluation measures was used based on the following transportation measures:

- Demand for the alternative;
- Truck demand shifts from downtown Presque Isle;
- Truck demand shifts from deficient roadway segments, such as Conant Road;
- Annual vehicle-miles traveled (VMT) savings; and
- Annual vehicle-hours traveled (VHT) savings.

For each of the transportation criteria assessed, the best alternative performance was indexed to a value of 1.0 and the remaining alternatives were referenced to that value, resulting in alternative indices between 0 and 1.

A separate index was developed for each measure in this manner. An alternative's overall performance rating was then determined by adding the index values for all measures (higher overall values indicate better performing alternatives). Figure 2-2, page 2-19, depicts the index rating for the proposed alternatives. The index includes measures such as corridor demand, VMT savings, VHT savings, Presque Isle downtown demand shifts, and Conant Road demand shifts. Detailed computations are provided in Appendix B.

Figure 2-2
Summary of Preliminary Screening



As Figure 2-2 indicates, based on the transportation measures that address the Purpose and Need for the Study, Alternatives Hm/L-Conant, 1, 2, 2A, 1B, and 1A perform better than the other proposed alternatives. This is mainly because they attract higher demand and provide better travel time and travel distance savings when compared to the remaining alternatives. Alternatives Hm/L-Conant, 1, 2, 2A, 1B, and 1A would decrease both VMT and VHT.

Based on this preliminary screening analysis of the 11 alternatives, Alternatives 2B, 3, 3A, 3B, and Km were eliminated from further consideration because they do not address the Purpose and Need as well as the other alternatives that were considered. In addition, Alternatives 3 and 3A are likely unpermissible because of their proximity to Christina Reservoir, an area designated as “Significant Wildlife Habitat” by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) under the Maine Natural Resources Protection Act (NRPA). The NRPA is administered by the Maine Department of Environmental Protection (MDEP). The area is protected because it is a highly productive habitat for waterfowl and wading birds. The NRPA rules for Significant Wildlife Habitat (Chapter 335 of the MDEP’s Rules) prohibit alteration of Significant Wildlife Habitat if there is a practicable alternative that

would avoid or have less impact on the habitat. For this reason, because it appears there are viable alternatives that would not affect Significant Wildlife Habitat, it is unlikely that any alternative that affects Christina Reservoir could receive a permit from the MDEP under the NRPA because to do so would directly conflict with its regulations.

Dropping Alternative Km from further consideration in this Draft EA does not preclude it from being constructed as part of Corridor Km in the future as a result of the ACTS. The ACTS has a unique Purpose and Need from this Study and Alternative Km represents a segment of an approximately 153-kilometer (95-mile) corridor between Houlton and Madawaska that is being studied in the ACTS DEIS.

2.3.3 Final Screening

The final screening step evaluated and compared the alternatives carried forward from the preliminary screening (Alternatives Hm/L-Conant, 1, 2, 2A, 1B, and 1A) using construction costs, environmental impacts, and key implementation issues as factors in their consideration. The preliminary screening step identified these as the alternatives that best meet the Study's Purpose and Need from a transportation perspective. For this reason, transportation measures are not included in the final screening step because they were already considered in the preliminary screening step.

2.3.3.1 Construction Cost

Table 2-8, page 2-21, and Figure 2-3, page 2-22, present preliminary design and construction costs for the alternatives assuming a 2-lane roadway cross-section with the provision of auxiliary lanes (or truck climbing lanes) where warranted by the grades and length of grades on the highway. The costs for Alternatives 1A, 1B, and Hm/L-Conant include an upgrade of Conant Road up to Station Road. The cost estimates do not include right-of-way acquisition costs.

Table 2-8
Preliminary Design and Construction Cost Estimates

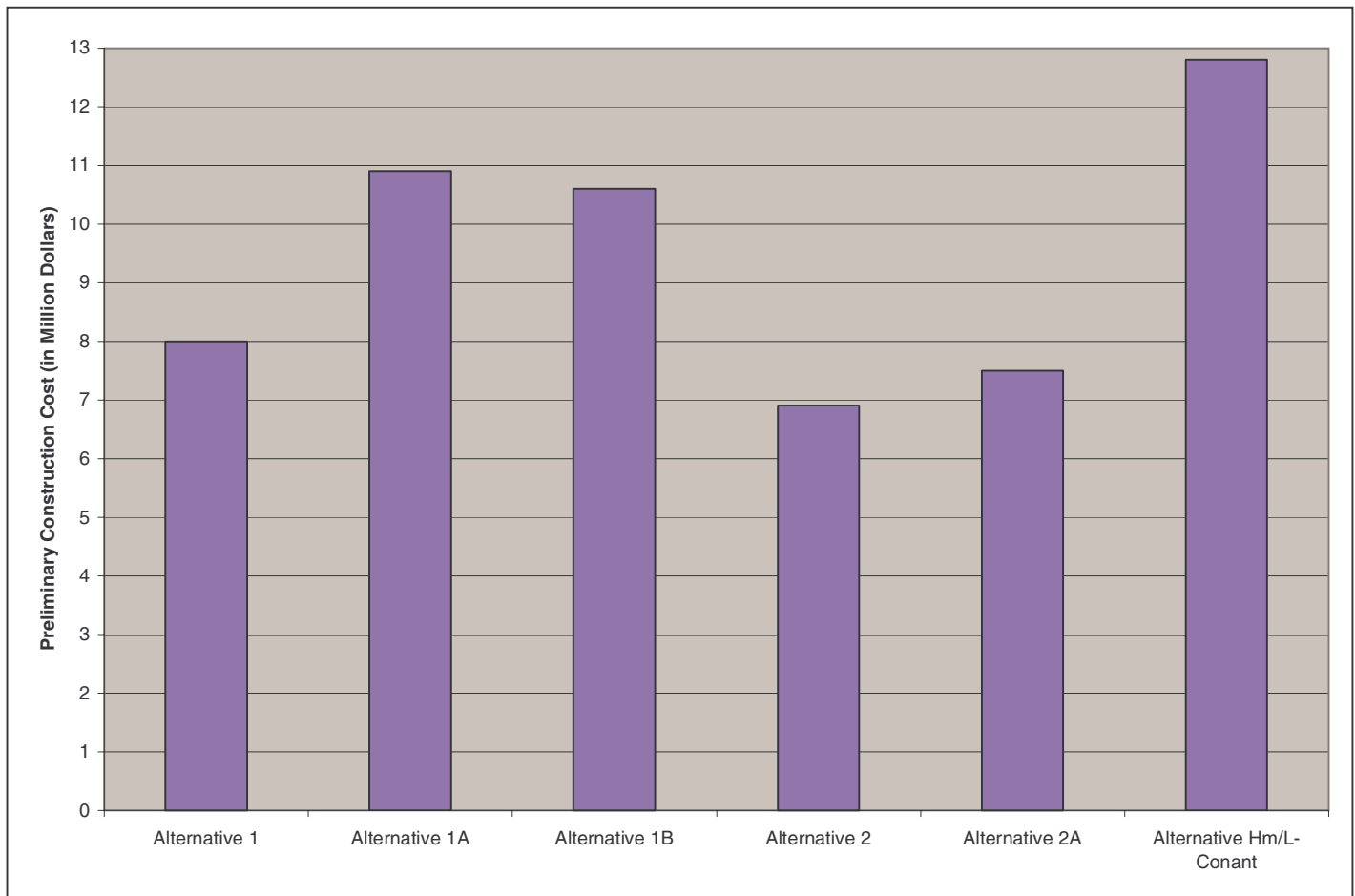
Alternative	2-Lane Construction Costs (\$ Million)
Alternative 1	\$8.0
Alternative 1A ¹	\$10.9
Alternative 1B ¹	\$10.6
Alternative 2	\$6.9
Alternative 2A	\$7.5
Alternative Hm/L-Conant ¹	\$12.8

Note: Costs are based on 2001 unit prices and do not include land acquisition. Upgrades of Conant Road assume full-depth reconstruction for the entire length of Conant Road up to Station Road.

[1] Alternatives 1A, 1B, and Hm/L-Conant include an upgrade of Conant Road.

Alternatives 1, 2 and 2A would be the least costly alternatives to construct varying from \$6.9 million (Alternative 2) to \$8.0 million (Alternative 1). Alternative Hm/L-Conant, 1A, and 1B are the most costly alternatives with construction costs exceeding \$10 million. The construction costs for Alternative Hm/L-Conant, 1A, and 1B are influenced by the need to upgrade Conant Road and provide auxiliary lanes on Conant Road where needed.

Figure 2-3
Summary of Preliminary Construction Costs



The six alternatives rank from least costly to most costly as follows:

- Alternative 2 (least expensive)
- Alternative 2A
- Alternative 1
- Alternative 1B
- Alternative 1A
- Alternative Hm/L-Conant (most expensive)

2.3.3.2 Environmental Impacts

Figure 2-4, page 2-23, presents the social and natural environmental resources in the Study Area. Table 2-9, page 2-24, presents the preliminary wetland and farmland

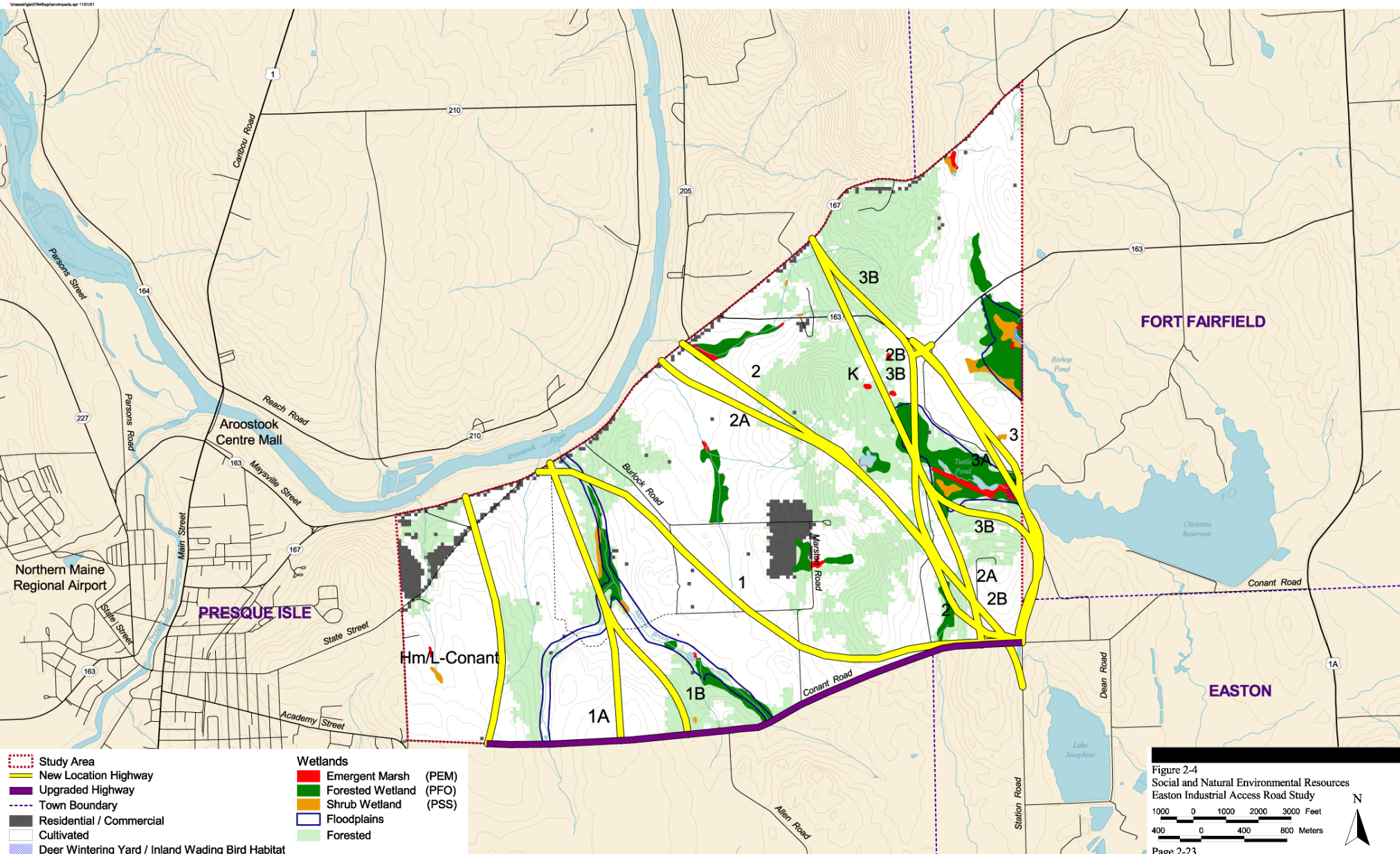


Figure 2-4
Social and Natural Environmental Resources
Easton Industrial Access Road Study
Page 2-23

impacts for the new location roadway portions of the alternatives carried forward into the second level of screening. Wetland and farmland impacts were considered to be the key resources that would have the greatest impact on alternative selection. Wetlands are a key factor because of their level of regulation and importance to the permitting agencies (MDEP and ACOE). Farmland impacts are a key resource because of their great importance to the local economy. To calculate impacts, a 30.5-meter (100-foot) wide template was overlaid onto available GIS environmental constraints data. This width represents a conservative estimate of impacts (*i.e.*, maximum level) based upon the impact zone that would occur with the construction of a new two-lane roadway with shoulders and truck climbing lanes. Actual impacts are likely to be less.

It should be noted that impacts along Conant Road can likely be greatly minimized through minor shifts in the road, the use of retaining walls, etc. Therefore, the impact level presented is very likely to be higher than what will actually be affected. Furthermore, impacts that would occur along the side of Conant Road would generally be less severe than those along new location roadway segments because they generally occur at the fringe of the resource area, whether it be a farm field or a wetland, and therefore do not have the impacts associated with bisecting the resources.

Table 2-9
Anticipated Environmental Impacts

Alternative	Wetland		Cultivated Land	
	ha ¹	ac ²	ha	ac
1	0.03	0.07	11.5	28.4
1A - new location segment	0.01	0.03	6.4	15.8
1A - Conant Road segment	0.29	0.72	8.9	21.9
1A - Total	0.30	0.75	15.3	37.7
1B - new location segment	0.01	0.03	5.4	13.4
1B - Conant Road segment	0.29	0.72	7.3	18.1
1B - Total	0.30	0.75	12.7	31.5
2	1.4	3.42	9.0	22.2
2A	0	0	9.8	23.9
Hm/L-Conant (new location segment)	0	0	6.3	15.6
Hm/L-Conant (Conant Road segment)	0.29	0.72	12.2	30.2
Hm/L-Conant - Total	0.29	0.72	18.5	45.8

Note: This analysis reflects a 30.5 meter (100-foot) wide corridor for each of the proposed new location roadway alternatives.

1 ha = hectares

2 ac = acres

As indicated by Table 2- 9, Alternative 2A would have no wetland impact. Alternative 2 would have the greatest wetland impact, at 1.4 hectares (3.42 acres).

Potential farmland impacts are more substantial. Because of the extensive amount of agriculture in the Study Area, it would be virtually impossible to avoid impacting farmland with any new location roadway. Alternative Hm/L-Conant would have the greatest farmland impact; Alternative 2A the least. Although Alternative 1 would affect only 11.5 hectares (28.4 acres) of farmland, the farmland is of exceptionally high value. Based on coordination meetings with the Maine Potato Board (see meeting notes provided in Appendix C), it was determined that Alternative 1 would cross one of the most productive potato farms in Aroostook County – the Lagerstrom Farm. In addition to the direct farmland losses it would cause, it would also disrupt a substantially larger area of farm operations by bisecting and limiting access to fields and interfering with extensive irrigation equipment installations.

2.3.3.4 Summary of Final Screening

The Final Screening looked at construction costs and potential impacts to farmland and wetlands for each of the six alternatives carried forward from the Preliminary Screening. Based upon this review, Alternative Hm/L-Conant was selected as the Preferred Alternative. It best meets the Purpose and Need by diverting the most trucks out of downtown Presque Isle by creating a more direct route to the Easton industrial area. It has no wetland impact along its new location segment and wetland impacts along Conant Road can be minimized. Farmland impacts are comparable to other alternatives considered. It was selected for further detailed study in this Draft EA to determine if it would have significant environmental impacts.

2.4 Description of the Preferred Alternative

As described above, Alternative Hm/L-Conant was selected as the Preferred Alternative. To provide a better understanding of the potential impacts from this alternative, a more detailed description of the expected specifications for the roadway is provided below.

There are two components of the Preferred Alternative. They are:

- Construction of a 2.2-kilometer (1.4-mile) long new location two-lane roadway between Conant Road and Routes 163/167, and
- Reconstruction of the 5.1-kilometer (3.2-mile) portion of Conant Road between the intersection formed by the new location roadway and Station Road. The design of the upgrade of Conant Road would be done to meet current MDOT standards for major collectors which include 3.7-meter (12-foot) travel lanes and

3.35-meter (11-foot) shoulders. The upgrade of Conant Road would include widening, re-grading, and the addition of an auxiliary lane to accommodate the existing 5.8 percent grade that occurs along approximately 914 meters (3,000 feet) of the roadway. The upgrade would also correct vertical and horizontal deficiencies and rebuild the roadway pavement to withstand heavy truck use.

MDOT would acquire adequate right-of-way to accommodate a future 4-lane roadway for both the new location roadway segment and Conant Road. Access along the new location roadway segment would be controlled access to prohibit driveway entrances, and access along Conant Road would be limited to allow existing driveways to remain, but would likely prohibit new driveways.

Construction of the Preferred Alternative would be phased. The new location roadway segment would be in the first phase of construction first and the upgrade of Conant Road done as a second phase at a later time. Recognizing the necessity of Conant Road being open for the new location roadway segment to attract trucks, MDOT would consider not posting Conant Road in the spring during the interim period, after the new location segment of the project has been constructed but before Conant Road has been upgraded. This decision would depend on the level of truck traffic and the condition of Conant Road. MDOT would also consider a more aggressive maintenance program for Conant Road during this interim period. It is important to note that the Preferred Alternative would not be adding additional traffic to Conant Road because trucks are already using Conant Road to reach the industrial area of Easton. Rather, the Preferred Alternative diverts traffic out of the downtown area of Presque Isle and from the residential area on Burlock and Marston Roads by constructing a safer, more direct route for trucks to follow.

Affected Environment

This chapter contains a description of the existing environmental conditions and resources relevant to this assessment. Existing conditions are described for the transportation, socioeconomic, and environmental resources that would be affected by or may affect the Preferred Alternative. In conformance with the FHWA's guidance to prepare meaningful yet concise documents, this Draft EA focuses on those resources that could potentially be significantly impacted by the proposed action. Other resources and impact categories that clearly shall not be significantly impacted are discussed only briefly.

3.1 Description of the Preferred Alternative

The Preferred Alternative is presented in [Figure 3-1, page 3-2](#). There are two components of the Preferred Alternative. They are:

- Construction of a 2.2-kilometer (1.4-mile) long new location two-lane roadway between Conant Road and Routes 163/167, and
- Reconstruction of the 5.1-kilometer (3.2-mile) portion of Conant Road between the intersection formed by the new location roadway and Station Road.

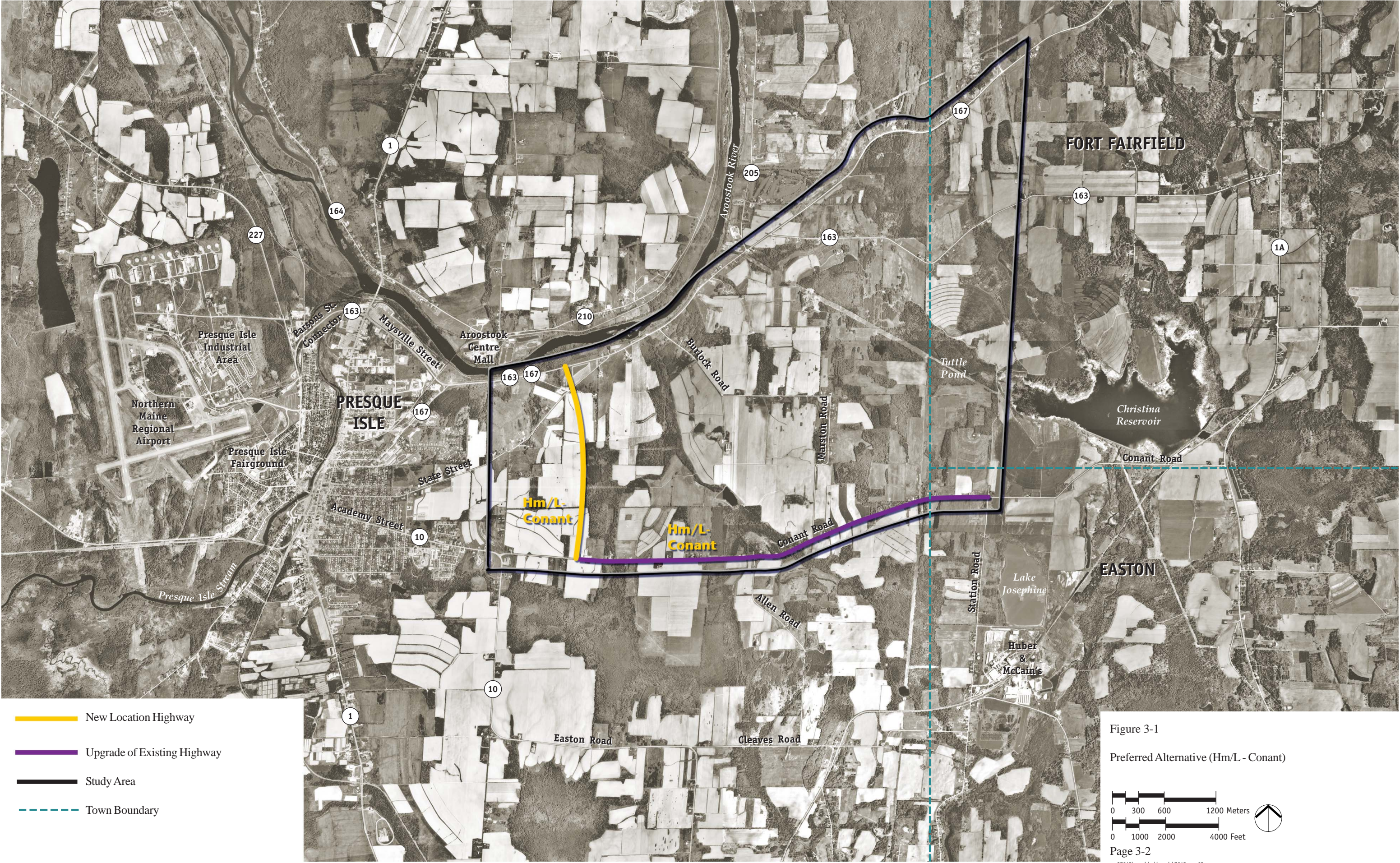
Refer to Section 2.4 on page 2-25 for a more detailed description of the Alternative.

3.2 Social Environment

This section discusses the social/built environment that would be affected by construction of the Preferred Alternative. [Figure 2-4, page 2-23](#), depicts the social and natural environmental constraints and resources within the Study Area.

3.2.1 Land Use and Right-of-Way

The majority of the Study Area is within the City of Presque Isle, with only approximately 670 meters (2,200 feet) of Conant Road in Easton. Presque Isle (population 10,550) is a city that serves as the shopping, business and employment center for the region. The Town of Easton (population 1,291) is a residential and







-  New Location Highway
-  Upgrade of Existing Highway
-  Study Area
-  Town Boundary

Figure 3-1
Preferred Alternative (Hm/L - Conant)

0 300 600 1200 Meters
0 1000 2000 4000 Feet

Page 3-2
ev.07648\graphics\boards\7648aer.p65

farming town with a community center, a library, churches, gas stations, and a small grocery store, as well as industrial uses, notably at the Presque Isle Industrial Park.

The Preferred Alternative is outside of the downtown area of Presque Isle and the majority of land within the proposed new location roadway corridor is either undeveloped forest land or in agricultural use. There are only scattered residences within the Study Area. The majority of the new location roadway segment would be in an agricultural/farming zone. Land along Route 163/167 is in the Business Zone. The segment of Conant Road in Presque Isle is zoned agricultural/farming. Easton does not have a zoning ordinance.

According to the 2002-2003 Northern Maine Snowmobile Map, developed by the Association of Aroostook Chambers of Commerce and the Snowmobile Clubs of Northern Maine, Interconnecting Trail System (ITS) Route 76 crosses the Study Area north of Conant Road.

3.2.2 Farms and Farmland

Farming, particularly potato farming, is one of the major components of the Aroostook County economy and much of the Study Area is actively farmed. Farmland impacts are an important factor in evaluating the proposed action because these impacts directly affect the economy, character, and visual attributes of the area.

The Farmland Protection Policy Act (FPPA) of 1981 was enacted by the United States Department of Agriculture (USDA) to ensure that significant agricultural lands are protected from conversion to non-agricultural uses. For highway projects receiving federal aid, the regulations promulgated under the FPPA (7 CFR Part 658, 1984) require MDOT to coordinate with the USDA Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS).

The FPPA regulates four types of farmland soils; prime farmland, unique farmland, farmland of state-wide importance, and farmland of local importance. Projects that impact 25 or more acres (10.1 hectares) of Important Farmland of Statewide Importance (or more than two acres per mile (0.8 hectares per kilometer) of new roadway) require documentation under the FPPA regulations. Compliance involves processing of USDA forms by FHWA and NRCS to document impacts to farmland. Form AD1006 is reviewed and evaluated by the NRCS to determine whether or not to proceed with the action. This decision considers the impacts of farmland conversion along with other environmental factors and project need. Evaluation of alternatives that minimize farmland impacts and measures to mitigate impacts are also part of the required process.

There are also a number of irrigation systems within the Study Area that service farming operations. These include mobile systems and fixed permanent systems. The permanent systems are typically center pivot systems with a pump station. The

irrigation water supply lines are located both above and below ground. These systems are supplied from Christina Reservoir, the Aroostook River, private ponds, and private wells.

3.2.3 Community Facilities

There are no community facilities within the Study Area. There are community facilities in Presque Isle, including the airport, library, swimming pools, hospital, municipal offices, etc., but they are generally located west of the Study Area in the more built up center of the city. The limited community facilities in Easton are located at the south end of Station Road at its intersection with Center Road (Route 10).

3.2.4 Environmental Justice

In accordance with Executive Order 12898 and subsequent procedures developed by the U.S. Department of Transportation, activities that have the potential to generate a disproportionately high and adverse effect on human health or the environment must include explicit consideration of their effects on minority populations and low-income populations.

Year 1990 census data shows that approximately 10,550 people live in Presque Isle and of these 217 are minorities (2 percent); Easton has a population of 1,291 of which only 4 are minorities (0.3 percent).

Median household income levels below 70 percent of the statewide average is one indicator that is commonly used to identify locations of low-income populations. Neither Presque Isle nor Easton have median household income below 70 percent of the state median which is \$31,952 annually.

Other indicators used to measure concentrations of economically disadvantaged persons is participation rates in federal assistance programs such as Aid to Families with Dependent Children (AFDC), Food Stamps, and federally assisted housing units. In 1997, about 3.9 percent of all households in Maine received AFDC payments and 12.3 percent received food stamps. Based upon 1996 data, 4.3 percent of the household in the Presque Isle-Caribou Labor Market Area (LMA) participated in the AFDC program and 16.6 % in the Food Stamps Program.

3.2.5 Population, Demographics, and Economics

The dominant population characteristic of Aroostook County generally has been the steady decline in total population over the past four decades. Regional population losses are attributable in part to the closure of two important military installations and the resulting departure of military personnel and dependents, during the 1960s and early 1990s. Persistent out-migration, unrelated to military base closures, has also occurred throughout much of the period.

According to trend data maintained by the U.S. Bureau of Economic Analysis (BEA), Aroostook County's population was relatively stable at 95,000 from 1969 through 1977, but has since experienced a consistent decline. The majority of this decline occurred between two time periods. The first was the recession between 1978 and 1981, a time characterized by rapidly escalating energy costs. During this time frame, Aroostook County lost approximately 5,000 residents. The second period of sharp population decline occurred from 1992 to 1995 as a result of the closure of Loring Air Force Base. By 1996, BEA estimated that Aroostook County's population had fallen to 77,600. A more recent (1998) estimate prepared by the Maine Department of Labor indicated a slightly lower population of 76,537 persons.

According to U.S. Census data obtained for this document, the population of Presque Isle has decreased from 12,886 in 1970 to 9,709 in 1998.

The labor force within the Presque Isle-Caribou Labor Market Area is listed as 28,350 in the recent Aroostook County Transportation Study (ACTS) socioeconomic analysis.

As discussed in Chapter 1, McCain's and Huber employ approximately 600 and 112 workers, respectively at their two plants in Easton. Combined, these two firms represent nearly a third of all manufacturing employment and four percent of total non-farm wage and salary employment in the Presque Isle Caribou Labor Market Area (LMA). In addition, the firms generate substantial demand for locally produced raw materials used in their production processes, making them two of the most economically important companies in Aroostook County.

3.2.6 Historical and Archaeological Resources

Potential impacts to cultural resources are subject to federal review under NEPA. In addition, impacts to cultural resources must be evaluated under the requirements of the National Historic Preservation Act (Act). Section 106 of the Act requires federal agencies to take into account the effect of their undertakings on properties included, or eligible for inclusion, in the National Register of Historic Places (National Register) and to afford the Advisory Council on Historic Preservation reasonable opportunity to comment on such undertakings.

Correspondence with the State Historic Preservation Officer (SHPO) indicates that no historic or archaeological resources occur within the Study Area (See Appendix A).

3.2.7 Public Recreation/Conservation Lands

Impacts to publicly owned recreational facilities are regulated under Section 4(f) of the Department of Transportation Act of 1966, which states that the Federal Highway Administration (FHWA) shall not approve use of significant historic resources,

public recreation lands, or public wildlife refuges unless it can be demonstrated that there are no feasible alternatives to the use of the resources, and all possible planning measures have been taken to minimize the adverse impacts.

Recreational properties purchased or maintained with funds allocated under the Land and Water Conservation Funds Act [Section 6(f)] are regulated under Section 4(f) and are governed by requirements for mitigation and coordination under Section 6(f) as well. Privately owned recreation areas are not regulated under either Section 4(f) or Section 6(f).

Based upon review of available data and consultation with local and state officials, MDOT has determined that there are no Section 4(f) or Section 6(f) properties within the Study Area.

3.2.8 Hazardous Materials Sites/Contamination

Hazardous waste sites pose a potential liability for the MDOT. Purchasing contaminated properties may result in clean-up costs, as well as other liabilities including compensation to surrounding property owners that were affected by the hazardous waste. Based on review of available GIS data and coordination with local and state officials there are no known hazardous waste sites within the Study Area that would be affected by the Preferred Alternative.

3.2.9 Utilities

Because of the rural nature of the Study Area, there are few utility installations. Single and three-phase distribution electric lines owned and operated by Maine Public Service Co. of Presque Isle are the most prevalent utility within the Study Area. Maine Public Service, Co. also operates high voltage electric transmission lines that cross through the Study Area. This line crosses Conant Road just west of the Easton/Presque Isle town line and extends north, crossing Route 163/167 just south of Route 205.

Aerial telephone lines supplied by Verizon generally run throughout the Study Area in conjunction with the overhead electric distribution lines. Cable is distributed by Time Warner, Inc., however it is only present along State Street and Route 163/167. No underground communication lines were identified in the Study Area.

There is no public water or sewer in the Study Area. Private on-site water and wastewater systems service the residential properties. A high-pressure underground water main traverses the Study Area. The water main, used to supply process water to McCain's, originates at the Aroostook River in Presque Isle and runs east, crossing Route 167, State Street, and Conant Road, before reaching McCain's.

3.3 Natural Environment

This section discusses the existing conditions of natural resources within the Study Area that may potentially be affected by the Preferred Alternative. Figure 2-4, page 2-23, shows the locations of resources identified through the GIS analysis conducted for this Draft EA.

3.3.1 Physical Geography and Soils

The Study Area consists of rolling hills and gently sloping or flat cultivated lands. Soils are considered in this Study, because factors, such as a soil type's likelihood to erode and the presence of boulders, may affect roadway construction, particularly in areas of deep cuts. Soil conditions may also affect the feasibility of constructing bridge foundations, drainage structures, or the use of the material as fill. All of the upland soils within the Study Area provide fair to good materials for roadway fill and subgrade. Soils in the Study Area vary, however, in their susceptibility to seepage and erosion, and their suitability for use in cut and fill slopes.

3.3.2 Aquatic Resources

This section describes water resources related to public water supplies, waterbodies, and wetlands. Surface and groundwater are important to public drinking water supply, wildlife habitat, agriculture, industry, and recreation.

3.3.2.1 Surface Public Drinking Water Supplies

The Maine Office of Geographic Information Systems (OGIS) has mapped surface water supply watersheds. The mapped areas include watersheds up to 1.2 kilometers (0.75 miles) upstream from the intake point.

There are no public drinking water supply sources in the Study Area. Presque Isle uses the Presque Isle Stream as a source for drinking water. The intake point for this water source is approximately 3.2 kilometers (2 miles) upstream of the Aroostook River, approximately 0.8 kilometer (0.5 mile) west of the University of Maine at Presque Isle (outside the Study Area). Fort Fairfield obtains drinking water from groundwater and from surface water supplies at Pattee Brook on the east side of town at the Canadian Border (outside of the Study Area). Easton has no surface drinking water supply. The Christina Reservoir, which is immediately east of the Study Area, is mapped as a reservoir but is not a drinking water source. It is used as a water supply for fire protection and for occasional irrigation.

3.3.2.2 Groundwater Drinking Water Supplies

Groundwater occurs throughout the Study Area. There is no state-wide groundwater quality-monitoring program; sampling occurs on a site-specific basis.

Aroostook County does not contain any Sole Source Aquifers as designated by the U.S. Environmental Protection Agency. All groundwater in the State of Maine is classified as GW-A, the highest level of groundwater classification as described in 38 MRSA § 470. Groundwater classified as GW-A is suitable for use as a public water supply. Mapped sand and gravel aquifer areas are defined as those providing a possible yield of greater than 10 gallons (0.04 cubic meters) per minute. No mapped sand and gravel aquifer areas occur in the Study Area.

Because of its rural nature, there is no public water or sewer service within the Study Area. Private on-site water systems service the residential properties along Conant Road and the rest of the Study Area. Private wells are typically drilled bedrock wells. Although there are six public water supply wells in Easton, none occur in the Study Area. In addition, there are no wellhead protection areas within the Study Area.

3.3.2.3 Water Quality

The Maine Department of Environmental Protection (MDEP) and its volunteers conduct water quality monitoring in Maine as part of a statewide program. The majority of the Study Area surface waters are in attainment of water quality goals. Section 303(d) of the federal Clean Water Act requires that states identify those stream segments and lakes for which effective water quality measures are not presently in place. Christina Reservoir, immediately east of the Study Area, has been listed on the State 303(d) list of waterbodies not in attainment of water quality goals. The reservoir historically has experienced eutrophication and algae blooms.

The Aroostook River just northwest of the Study Area is included on Maine's "at-risk" and "sensitive or threatened regions or watersheds" list under the Maine Stormwater Management Law, the Nonpoint Source Pollution (NPS) priority watershed list, and as a Priority Waterbody in the MDOT Best Management Practices (BMPs) Manual. The receiving waters of these watersheds have been determined to be water quality limited or at risk of water quality degradation. The Aroostook River Watershed is listed as a Category I – In Need of Restoration by the MDEP under the Clean Water Action Plan. Listing does not necessitate additional regulation, but requires planning and consideration in development design, including measures to reduce the impact of roadway stormwater runoff NPS pollution.

3.3.2.4 Waterbodies and Waterways

Four small ponds (Tuttle Pond and three unnamed waterbodies) and a portion of Bishop Pond occur in the Study Area. The ponds are too small to be classified as lacustrine wetlands because they are less than 8 hectares (20 acres) in size.² Three of the small ponds are in the forested wetland complex just west of the Christina Reservoir, and the fourth is an impoundment along Merritt Brook. Bishop Pond is a narrow waterbody, extending just into the eastern portion of the Study Area.

The Christina Reservoir is a 160-hectare (400-acre) manmade pond immediately east of the Study Area. The reservoir is primarily used as a source of water for fire protection, with occasional use for farmland irrigation. The Christina Reservoir is listed with the MDEP Bureau of Land and Water Quality as a lake that commonly experiences algal blooms (at least once per year). The reservoir historically received a large amount of process wastewater from the McCain Foods plant, which is likely the cause of its eutrophication and algae blooms.

There are nine waterways (Merritt Brook and eight unnamed streams) in the Study Area. Seven of the streams (including Merritt Brook) are tributary to the Aroostook River and the remaining two flow into Christina Reservoir.

3.3.2.5 Wetlands

Wetlands in the Study Area are regulated and protected under state and federal regulatory programs because of the important functions they provide to the public. The State of Maine Natural Resources Protection Act Regulations (38 M.R.S.A., Sections 480-A to 480-Z) (NRPA) are designed to protect Maine's natural resources, including rivers, streams, great ponds, and freshwater wetlands. Section 404 of the Federal Clean Water Act regulates discharges of fill to wetlands. Executive Order 11990 also protects wetlands by directing federal agencies to avoid new construction in wetlands where there is a practicable alternative.

Wetlands in the Study Area were identified using National Wetland Inventory (NWI) maps, United States Geological Survey (USGS) maps, and state wetlands mapping. NWI polygon data and USGS data were obtained from the OGIS and re-projected onto the project coordinate system. No field delineation of wetland boundaries was undertaken during this phase of the Study.

The National Wetland Inventory (NWI) maps use the Cowardin Classification System (Cowardin *et al.* 1979) to classify wetlands by "systems" according to plants, soils, and frequency of flooding. The systems are then further subdivided into



² Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 131pp.

subsystems, classes, and subclasses based on substrate material, flooding regime, and vegetative life form. Wetlands in the Study Area have been classified based on the information contained on the NWI and United States Geological Survey (USGS) maps. Classifications include forested wetlands, shrub wetlands, emergent wetlands, waterbodies (lakes and ponds), and waterways (rivers and streams).

Hydric soils are one of the three criteria used for classification under the Cowardin system. Mapped hydric soils may also provide information on potential wetland locations, although field-verification is necessary for accurate delineation. Hydric soils were not used to determine wetland locations because the NWI mapping was assumed to be sufficiently accurate for this stage of the Study. Wetlands will be delineated in order to fully assess wetland impacts and mitigation requirements later in the design process.

Wetlands Types in the Study Area

Three wetland systems have been identified in the Study Area and are described below. Wetlands are shown on [Figure 2-4 \(page 2-23\)](#).

Forested Wetlands

Wetlands identified as Palustrine Forested Wetlands (PFO) on the NWI maps are grouped into the forested wetland category. Forested wetlands in the Study Area include forested bogs, forested fens, deciduous forested swamps, and coniferous forested swamps. In the Study Area, the Christina Reservoir, east of the Preferred Alternative, provides the largest forested wetland complex in the Study Area. Other forested wetlands include wetlands associated with a small pond in the eastern portion of the Study Area (Tuttle Pond), wetlands associated with tributaries to Aroostook River in the western portion of the Study Area, and a small forested wetland complex near the residential development in the central portion of the Study Area.

Shrub Wetlands

Wetlands identified as Palustrine Scrub-shrub Wetlands (PSS) on the NWI maps are grouped into the shrub wetland category. Shrub wetlands include shrub bogs and shrub swamps. Shrub wetlands are primarily found in two locations in the Study Area: in the Christina Reservoir wetland complex and along a tributary to Aroostook River. There are three very small shrub wetlands scattered through the Study Area.

Emergent Wetlands

Wetlands identified as Palustrine Emergent Wetlands (PEM) on the NWI maps are grouped into the emergent wetland category. Freshwater marshes are usually seasonally flooded wetlands that are frequently saturated at or near the surface when not flooded, and are dominated by grasses or grass-like plants. Freshwater wet meadows are seldom flooded wetlands that are saturated throughout the

growing season, and are dominated by herbaceous vegetation that is adapted to these saturated conditions. Emergent wetlands are found in the eastern section of the Study Area within the Christina Reservoir complex, Tuttle Pond, along tributaries to the Aroostook, and near the residential development in the central portion of the Study Area.

3.3.3 Floodplains

Floodplains are regulated by the Federal Emergency Management Agency (FEMA) and administered by local floodplain management ordinances within individual communities. Floodplains are also federally regulated by Executive Order 11988, which requires federal agencies to avoid, to the extent possible, impacts to floodplains.

There are three areas of mapped floodplains in the Study Area ([Figure 2-4, page 2-23](#)). One area is associated with the Christina Reservoir, one is associated with the Bishop Pond wetland complex, and one is associated with Merritt Brook and one of its tributaries.

3.3.4 Vegetation

Plant communities are regulated under federal, state, and local regulations if they are wetlands or contain rare plants. While there are no federal or state regulations that specifically regulate upland natural communities, CEQ guidelines require consideration of environmental impacts on biodiversity. Exemplary Natural Communities are identified by the Natural Resources Information and Mapping Center (NRIMC) and contain ecologically sensitive communities with uncommon populations of plant species. Although they are also a non-regulated resource, a database is maintained by the Maine Natural Areas Program (MNAP) and used as an informational planning tool during project development and design. No rare plants or rare plant communities designated by MNAP occur in the Study Area.

The majority of the Study Area is cultivated farmland. Most fields are planted annually with potatoes or lie fallow. Other vegetation types in the Study Area include broken patches of forest, which is primarily deciduous, and small areas used for pasture and hay.

3.3.5 Fisheries and Wildlife

Fisheries are primarily protected under the federal Clean Water Act (Section 404), which regulates discharges of fill to wetlands, waterways, and “other waters of the United States.” Discharges that have an “unacceptable adverse effect...on fishery areas (including breeding and spawning areas) or wildlife” may be prohibited. The NRPA also includes a standard prohibiting unreasonable harm to fisheries.

Optimal fisheries habitat is provided in areas where dense overhanging vegetation shades streams and rivers, which regulates water temperature and provides cover and potential food resources for fish. Natural stream channels with cuts and overhanging banks also provide higher quality habitat by offering deep areas for resting and shallower areas of highly oxygenated water. Although several of the streams are within or adjacent to cultivated fields, a natural vegetation buffer is present along the majority of the stream banks in the Study Area. Therefore, the streams in the Study Area are assumed to provide fisheries habitat. Streams adjacent to existing roads are assumed to consist of lower quality habitat than streams in undeveloped areas.

According to Dave Basley, Region G fishery biologist for MDIF&W, the Aroostook tributaries in the Study Area are likely to be important to brook trout (*Salvelinus fontinalis*) in the Aroostook River by providing a source of cool, highly oxygenated water to the Aroostook River (pers. comm., January 2002). Merritt Brook and the Tuttle Pond drainage are likely to provide suitable habitat to support trout and other cold water fishes.

The four ponds in the Study Area, as well as the portion of Bishop Pond that occurs in the Study Area, are surrounded by wetlands or undeveloped lands, and are also assumed to provide fisheries habitat.

The State of Maine protects “Significant Wildlife Habitat” under the NRPA. A permit is required in accordance with the NRPA for projects that involve work within mapped significant habitat, or within 100 feet (30 meters) of mapped Significant Wildlife Habitat.

The Christina Reservoir, immediately east of the Study Area, is designated as Significant Wildlife Habitat by MDIF&W. The reservoir is designated as an Inland Waterfowl and Wading Bird Habitat, and constitutes the second-most important wildlife habitat in Maine for its waterfowl productivity (see Appendix A for meeting notes with MDIF&W, Region G). There are no other areas of Significant Wildlife Habitat, such as deer wintering areas, in the Study Area.

There are no regulatory programs for the protection of wildlife in Maine. However, wildlife is an important component of biological diversity, and must be considered during the NEPA process. The majority of the Study Area is cultivated land, and therefore provides habitat for species adapted to human disturbance such as killdeer, barn swallows, raccoons, white-tailed deer, and meadow voles.

3.3.6 Threatened and Endangered Species

Threatened and endangered species are important to biodiversity because they represent elements that are unique or few in number in an ecological system. No state-listed animals or plants have been identified in the Study Area. The U.S. Fish

and Wildlife Service (USFWS) also verified that no federally listed plant or animal species occur in the Study Area (See Appendix A for USFWS correspondence).

3.4 Atmospheric Environment

This section discusses existing air quality and noise levels in the Study Area.

3.4.1 Air Quality

Microscale analysis of carbon monoxide (CO) is required to evaluate the Preferred Alternative in relation to the National Ambient Air Quality Standards (NAAQS). Aroostook County is currently designated as attainment for ozone and CO. Downtown Presque Isle is a maintenance area for particulate matter. The one-hour NAAQS value for CO is 35 parts per million (ppm); the eight-hour NAAQS is 9 ppm. Existing and proposed peak hour CO levels were predicted using the EPA's CAL3QHC computer model and emission factors generated by the EPA's MOBILE5a(H) computer model. Input used in these models reflect worst case meteorological (*i.e.* wind, speed, stability class, etc.) conditions and traffic data. The model was run for five selected sites within the Study Area with wind direction varied in one degree increments. A background concentration of 4.0 ppm was used. Predictions were performed for 5 analysis sites (the same sites used for the noise analysis). The maximum existing one-hour CO concentration was 5.3 ppm. Since the maximum one-hour value is less than the eighth-hour NAAQS, no eight-hour prediction was necessary. Refer to Appendix D for more detailed analysis.

3.4.2 Noise

A noise analysis was conducted to evaluate the noise impacts of the Preferred Alternative. The analysis evaluates sound levels at receptor locations along roadways within the Study Area. The receptor locations studied include sites along Route 1 in downtown Presque Isle, Route 163/167, Conant Road and Burlock Road, as indicated on [Figure 3-2, page 3-14](#).

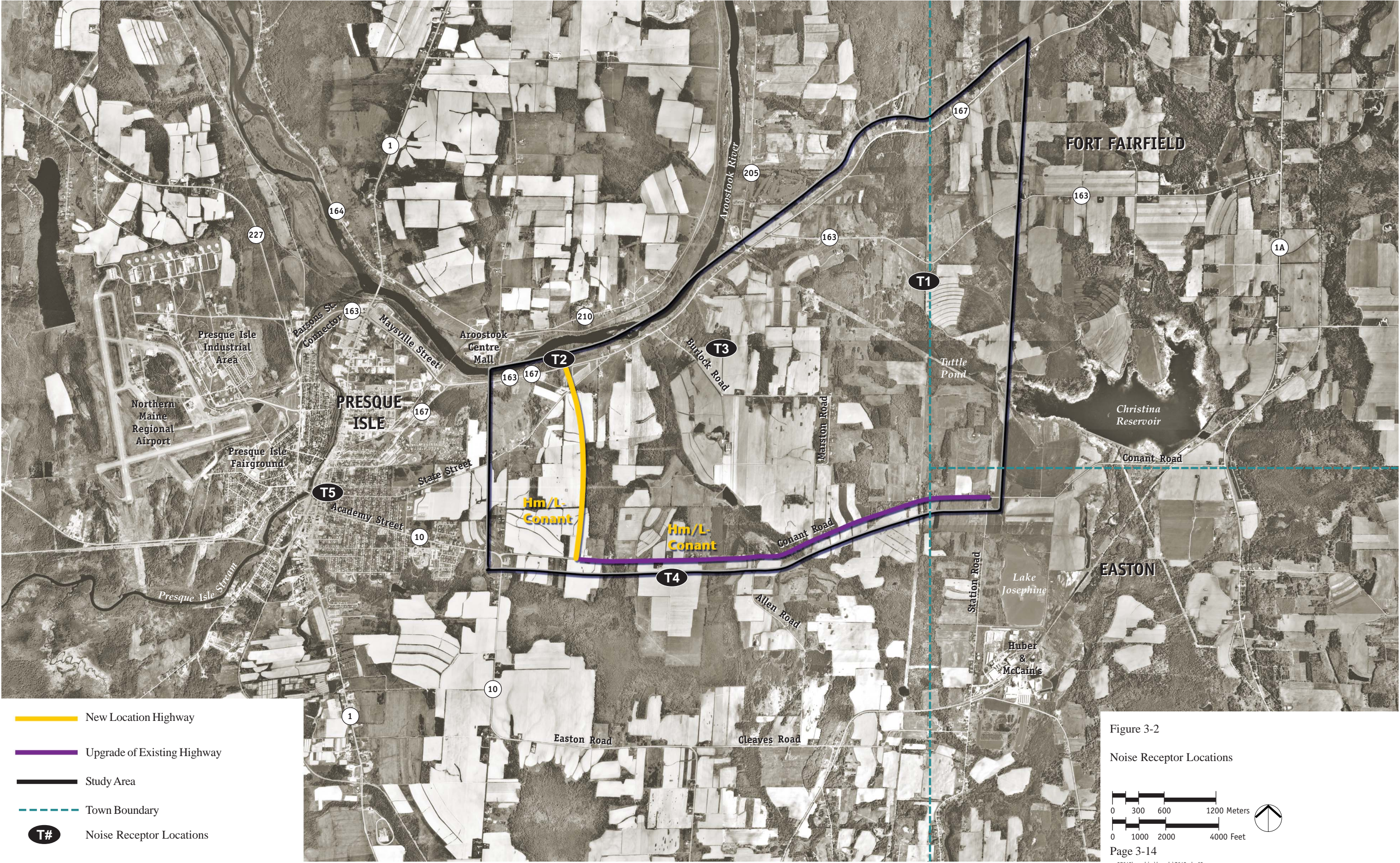


Figure 3-2
Noise Receptor Locations

MDOT³ and FHWA⁴ noise impact assessment procedures for Type I projects were used to identify receptor locations, to predict existing and future noise levels, to determine project noise impacts, and to evaluate noise mitigation measures. A Type I project is a roadway project that results in the construction of a new location roadway, or the physical alteration of an existing roadway that substantially changes either the horizontal or vertical alignment, or one that increases the number of through travel lanes.

3.4.2.1 Regulatory Context: Noise Standards and Criteria

FHWA has established noise abatement criteria⁵ to help protect the public health and welfare from excessive vehicle traffic noise. Traffic noise can adversely affect human activities such as communication. Recognizing that different areas are sensitive to noise in different ways, FHWA has established Noise Abatement Criteria (NAC) according to land use. The NAC are described in Table 3-1 on page 3-16. The MDOT endorses the FHWA procedures⁶ and considers a receptor location to be impacted by noise when existing or future sound levels approach (within 1 dBA), are at, or exceed the NAC, or when future sound levels exceed existing sound levels by 15 dBA or more. It is generally considered that a 1 to 5 dBA increase/decrease represents a slight change in noise levels, a 6 to 14 dBA increase/decrease represents a moderate change in noise levels, and a 15 dBA or greater increase/decrease represents a substantial change in noise level. The feasibility of noise mitigation is evaluated when noise impacts are identified at receptor locations.



³ *Highway Traffic Noise Policy*, Maine Department of Transportation, April 1998

⁴ *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, Federal Highway Administration's Title 23 Code of Federal Regulations, Part 772

⁵ *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, Federal Highway Administration's Title 23 Code of Federal Regulations, Part 772

⁶ *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, Federal Highway Administration, June 1995

Table 3-1
Noise Abatement Criteria (NAC)
One-Hour, A-Weighted Sound Levels in Decibels (dBA)

Activity Category	$L_{eq}(h)^*$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purposes.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* $L_{eq}(h)$ is an energy-averaged, one-hour, A-weighted sound level in decibels (dBA).

Source: 23 CFR Part 772 - *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.

Noise is defined as unwanted or excessive sound. The individual human response to noise is subject to considerable variability since there are many emotional and physical factors that contribute to the differences in reaction to noise.

Sound (noise) is described in terms of loudness, frequency, and duration. Loudness is the sound pressure level measured on a logarithmic scale in units of decibels (dB). For community noise impact assessment, sound level frequency characteristics are based upon human hearing, using an A-weighted (dBA) frequency filter. The A-weighted filter is used because it approximates the way humans hear sound. Table 3-2, page 3-17, presents a list of common indoor and outdoor sound levels. The duration characteristics of sound account for the time-varying nature of sound sources.

Table 3-2
Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μ Pa)	Sound Level (dBA)	Indoor Sound Levels
	3,324,555	- 110	Rock Band at 5 m
Jet Over-Flight at 300 m		- 105	
	2,000,000	- 100	Inside New York Subway Train
Gas Lawn Mower at 1 m		- 95	
	632,456	- 90	Food Blender at 1 m
Diesel Truck at 15 m		- 85	
Noisy Urban Area—Daytime	200,000	- 80	Garbage Disposal at 1 m
		- 75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	- 70	Vacuum Cleaner at 3 m
Suburban Commercial Area		- 65	Normal Speech at 1 m
	20,000	- 60	
Quiet Urban Area—Daytime		- 55	Quiet Conversation at 1 m
	6,325	- 50	Dishwasher Next Room
Quiet Urban Area—Nighttime		- 45	
	2,000	- 40	Empty Theater or Library
Quiet Suburb—Nighttime		- 35	
	632	- 30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		- 25	Empty Concert Hall
Rustling Leaves	200	- 20	
		- 15	Broadcast and Recording Studios
	63	- 10	
		- 5	
Reference Pressure Level	20	- 0	Threshold of Hearing

μ Pa MicroPascals describe pressure. The pressure level is what sound level monitors measure.

dBA A-weighted decibels describe pressure logarithmically with respect to 20 μ Pa (the reference pressure level).

m meter

Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.

The most common way to account for the time-varying nature of sound (duration) is through the equivalent sound level measurement, referred to as L_{eq} . The L_{eq} averages the background sound levels with short-term transient sound levels and provides a uniform method for comparing sound levels that vary over time. The time period used for roadway noise analysis is typically one hour. The peak hour L_{eq} represents the noisiest hour of the day/night and usually occurs during the peak periods of automobile and truck traffic. The FHWA guidelines and criteria require the use of the one-hour L_{eq} for assessing roadway noise impacts on different land uses.

The following general relationships exist between hourly traffic noise levels and human perception:

- A 1 or 2 dBA increase/decrease is not perceptible to the average person.
- A 3 dBA increase/decrease is a doubling/halving of acoustic energy, but is just barely perceptible to the human ear.
- A 10 dBA increase/decrease is a tenfold increase/decrease in acoustic energy, but is perceived as a doubling/halving in loudness to the average person.

3.4.2.2 Existing Noise Levels

The Study Area was evaluated to identify receptor sites that have outdoor activities that might be sensitive to roadway noise. Five receptor sites were identified along the existing roadways within the Study Area. Four of the receptor locations are included in the FHWA's "Activity Category B" which has a noise abatement criterion of 67 dBA. One receptor location is included in FHWA's "Activity Category C" which includes land uses such as commercial buildings, (i.e., those that do not involve temporary overnight residence), and has a noise abatement criterion of 72 dBA.

The noise analysis evaluated the highest noise levels in the Study Area. The highest noise levels were found to occur during the evening peak hour traffic commuting period based upon a review of traffic data and noise monitoring data, which was collected during peak and off-peak traffic periods. A noise monitoring program measured existing sound levels at five receptor locations within the Study Area to help establish existing sound levels and to calibrate the noise model to specific roadways. The sound levels were calculated using the current modeling methodology, FHWA's Traffic Noise Model (TNM)⁷. The modeling input data included peak hour traffic volumes, vehicle mix, vehicle speeds, and roadway and receptor geometry. The existing sound level predictions were based on the evening peak hour traffic commuting period. The noise analysis calculated the sound levels at each receptor location and compared the results to the MDOT and FHWA noise impact criteria. Where noise impacts were identified, mitigation measures were evaluated to



⁷ FHWA Traffic Noise Model: User's Guide, Federal Highway Administration, FHWA-PD-96-009, DOT-VNTSC-FHWA-98-1, January 1998

determine if they were reasonable, feasible, and likely to be included as part of the Preferred Alternative.

Sound levels were measured at five receptor locations during the week of June 4, 2001 in conformance with the FHWA noise monitoring guidelines.⁸

Receptor T5 is outside the Study Area, but is included in the analysis because the Study's Purpose and Need includes improving the environment in downtown Presque Isle.

Traffic data were obtained at the same time as the sound level data. These traffic data included traffic volumes, vehicle mix (automobiles, medium trucks, and heavy trucks), and operating speeds. Noise sources in the Study Area included vehicles traveling on several roadways, including Route 1, Route 163, Route 167, Route 205, State Street, Conant Road and Burlock Road. The traffic data and roadway geometry were used to predict sound levels at each noise monitoring site. The results of the predicted sound levels were compared to the monitored sound levels to calibrate the noise prediction model. [Figure 3-2, page 3-15](#), presents the location of the noise monitoring sites. Table 3-3 presents the results of the noise monitoring sound levels.

Table 3-3
2001 Existing Sound Levels

Receptor Number	Receptor Location ¹	A-Weighted Sound Level in Decibels (dBA)	
		FHWA Criterion	Existing Condition Monitored L _{eq}
T 1	Route 163 at Hoyt Road	67	56.8
T 2	Route 163/167 at Washburn Junction	72	71.2 ²
T 3	Burlock Road at Route 163/167	67	66.0 ²
T 4	Conant Road between Route 10 and Allen Rd	67	63.1
T 5 ³	Route 1 between State St. and Academy St.	67	79.4 ²

¹ The monitoring sites are depicted in Figure 3-2 (page 3-14).

² This sound level approaches or exceeds the FHWA noise abatement criterion.

³ This location is outside the Study Area

Source: VHB, Inc.

The existing sound levels presented in Table 3-3 represent the highest sound levels in the Study Area that have been calculated using the peak hour traffic data. The Study Area includes residential and commercial buildings. Buildings are typically located approximately 10 to 15 meters (33 to 49 feet) from the roadways. The results of the noise analysis demonstrate that three receptor locations (T5, T2, and T3) have existing sound levels that approach or exceed the NAC. This reflects the heavy truck traffic currently traveling on Route 1, Route 163/167, and Burlock Road.

⁸ *Measurement of Highway-Related Noise*, US Department of Transportation, Federal Highway Administration, FHWA-PD-96-046, May 1996

3.5 Transportation Environment

This section provides a general overview of the existing transportation conditions in the Study Area. It describes the key roadway corridors that serve the Study Area and system continuity and mobility.

3.5.1 The Transportation System

Route 1, Route 1A, and Route 205 are the key regional north/south roadways used to travel to/from the Study Area. Route 163/167, Route 164, Route 163, Route 10, and Conant Road provide regional east/west access.

Other key roadways in the Study Area include Marston Road/Burlock Road, State Street, Maysville Street, and Station Road. Marston Road/Burlock Road link Conant Road with Route 163/167 and are located predominantly within residential areas. State Street provides an east/west connection to downtown Presque Isle. Maysville Street is the segment of Route 163 north of downtown Presque Isle that serves as a north bypass of Presque Isle for traffic headed east toward Route 1A. Station Road provides access to the Huber and McCain's processing plants in the Easton industrial area.

3.5.2 Traffic Demands

Daily traffic demands on the key roadways were collected in July 2001, using 24-hour automated traffic recorders (ATRs). The purpose of collecting the data was to help quantify the potential shifts in traffic that might occur from the Preferred Alternative. Daily truck and non-truck volumes were quantified on Route 1 (Main Street) in downtown Presque Isle, on Conant Road, and on Burlock Road/Marston Road. The following traffic volumes were recorded:

- Route 1 (Main Street) in downtown Presque Isle (between Route 227 and Academy Street) carries approximately 15,600 vehicles per day (vpd). Of this demand, 1,900 vpd were trucks (12 percent). This is the heaviest traveled roadway in the Study Area.
- Conant Road (between Route 10 and Marston Road) carries approximately 1,300 vpd. Of this demand, 160 vpd were trucks (12 percent).
- Burlock Road/Marston Road carries approximately 900 vehicles per day, 100 vpd of which are trucks (10 percent). It can be speculated that most of the traffic on Burlock Road/Marston Road is cut-through traffic between Route 163/167 and Conant Road.

3.5.3 System Continuity and Mobility

The Purpose and Need for this Study is driven by the need for a direct, safe route to Easton from the north and west that will improve the mobility of raw material and products, as well as divert truck traffic from downtown Presque Isle. The existing roadway network results in trucks using Route 1 through downtown Presque Isle and residential roads such as Burlock Road and Marston Road to get to Easton from the north and west. Trucks have difficulty using this route through downtown Presque Isle because of the presence of buildings located near the roadway, the lack of shoulders, and the presence of on-street parking that make it difficult for trucks to turn onto and off Route 1. These factors slow truck movements and disrupt traffic in the downtown area. The use of Burlock Road/Marston Road to get to Easton is circuitous and results in heavy truck traffic through residential areas. Moreover, the pavement design on Burlock Road/Marston Road was never intended to serve the large number of heavy trucks that now use them, resulting in rapidly deteriorating pavement surfaces.

Not all roadways in the Study Area are available for year-round use. To limit damage to Conant Road and Burlock Road/Marston Road, MDOT and the City of Presque Isle typically post these roadways in the spring for several months. These postings restrict truck weights and force trucks that exceed the posted weights to take an even more circuitous route to Easton. The routes that trucks commonly follow when road postings block their regular route to Easton are substantially longer and add considerable time to a truck trip (see [Figure 1-2, page 1-4](#)).

The lack of a direct, safe, reliable route to Easton and the mobility issues with existing routes results in the need to improve transportation system continuity and mobility in the Study Area through transportation improvements.

Environmental Consequences and Mitigation

4.1 Introduction

This Chapter discusses the Preferred Alternative's potential impacts to the social and natural environment. The Preferred Alternative (Hm/L-Conant) consists of two components, each of which have logical termini and independent utility:

- Construction of a new north-south, 2.2-kilometer (1.3-mile) segment of two-lane roadway between Route 163/167 and Conant Road, and
- Reconstruction of the 5.1-kilometer (3.2-mile) portion of Conant Road between the intersection formed by the new roadway and Station Road.

Construction of the Preferred Alternative would be phased. The new location roadway would be constructed first and the upgrade of Conant Road done as a second phase at a later time. This Alternative would not add substantial additional traffic to Conant Road because trucks are already using Conant Road to reach the industrial area of Easton. Rather, this Alternative diverts traffic out of the downtown area of Presque Isle and onto Maysville Street to reach Conant Road farther to the east. Maysville Street, however, was designed to accommodate heavy truck traffic.

Primary (direct) and secondary (indirect) impacts are addressed in this Chapter. Potential mitigation measures to compensate for unavoidable impacts are also presented in this Chapter.

The impacts were estimated by assuming a 30.5-meter (100-foot) width for both the new location roadway and along Conant Road. This width represents a conservative estimate of impacts based upon the impact zone that would occur with the construction of a new two-lane roadway with shoulders and truck climbing lanes. Actual impacts are likely to be less. Impacts along Conant Road are dependent on the amount and location of roadway widening that would occur. That information has not yet been fully determined. It should be noted, however, that impacts along Conant Road may be minimized through minor shifts in the road, the use of retaining walls, etc. Lastly, impacts that would occur along the side of Conant Road are likely to be less severe than those along the new location roadway because they generally occur

at the fringe of the resource area, whether it be a farm field or a wetland, and therefore do not have the impacts associated with bisecting the resources.

4.2 Social Environment

This section discusses impacts to land use and right-of-way; farms and farmland; community facilities; Environmental Justice; population, demographics and economics; hazardous materials sites/contamination, and utilities. As discussed in Chapter 3, there are no community facilities, historic or archaeological resources, or public recreation/conservation lands, or hazardous materials sites within the Study Area. Therefore, they are not discussed in this Chapter.

4.2.1 Land Use and Right-of-Way

Construction of the new location roadway portion of the Preferred Alternative would affect a total of six parcels and no structures. Access along the new location roadway would be controlled.

The upgrade of Conant Road could affect up to a total of 41 parcels, assuming that all parcels along both sides of the road would be affected. There are approximately 13 structures within approximately 15 meters (50 feet) of the existing edge of the pavement along Conant Road, including 11 residences and two barn and/or potato storage facilities. Of these, the proposed upgrade of Conant Road would likely cause three potential residential displacements (based upon their proximity to the edge of the roadway). One storage shed and potato house may also be impacted.

All property acquisitions shall be subject to the provisions of the Uniform Relocation Assistance and Real Property Act of 1970. A licensed professional appraiser shall establish the fair market value for each property based on comparable sales, and landowners would be reimbursed for any relocation required by the construction of the Preferred Alternative. Access to Conant Road would be limited; existing uses would be allowed to continue, but new access would likely not be allowed. Access along the new location roadway would be controlled to prohibit driveway entrances.

The No-Build Alternative would not require any new right-of-way and no takings.

4.2.2 Farms and Farmland

The potential impacts to active farms from the Preferred Alternative include both direct and indirect impacts. Direct impacts result from the construction of new location roadways across existing farms or by expansion of existing roads into adjacent farms. Direct impacts include both a loss of farmed land and may also include impacts to buildings and other farm infrastructure. Loss of farmland that shortens a field may also affect the length of rows and in turn, affect efficiency and productivity. Impacts along new location alternatives may result in more direct

impacts to active farms by isolating farm fields and facilities and by subdividing fields into land-locked or unusable fragments. Impacts associated with upgrading roadways may be limited to the loss of portions of fields close to the existing road. Roadways may indirectly affect agricultural production because of roadway-generated stormwater pollutants.

Based on a GIS analysis using an alternative impact width of 30.5 meters (100 feet), The construction of the Preferred Alternative was calculated to require the conversion of approximately 6.3 hectares (15.6 acres) of active farmland along the new location roadway, and bisect three active potato farms. Bisecting farms could potentially cause problems in accessing one field from the next, impacts to irrigation equipment, and affect general farm access to the main roadways. In addition, approximately 12.2 hectares (30.2 acres) of active farmland could potentially be affected along Conant Road (based upon a conservative estimate of a 30.5 meter (100-foot) wide impact zone). The actual impact area is likely to be much less, and some impacts could be avoided through minor shifts in the roadway alignment, the use of steeper sideslopes, etc. Therefore, the 18.5-hectare (45.8-acre) is a conservative estimate (*i.e.*, the maximum impact). Strip losses would not be expected to be as severe as impacts along the new location roadway.

During the design phase every attempt shall be made to avoid and minimize impacts to farmland to the greatest extent practicable. In particular, MDOT will examine shifting the new location roadway as far to the east as is practicable to place it closer to the edge of existing fields, thereby reducing direct impacts (*i.e.*, actual area removed from production) as well as associated access/operational issues caused by bisecting the fields. In addition, MDOT will work with farmers regarding potential impacts to private farm irrigation systems that may be displaced or need to be redesigned because of the Preferred Alternative.

The No-Build Alternative would have no impacts to farms or farmland.

4.2.3 Environmental Justice

U.S. Census data and state economic data was used to assess impacts related to Executive Order 12898 on Environmental Justice. Those populations that would be most directly served or affected by the proposed action were specifically considered. The Presque Isle-Caribou Labor Market Area has a higher participation rate in AFDC and Food Stamps Programs than the Maine state average. This is one indicator of an economically disadvantaged population.

Evaluation of available data indicates that construction of the Preferred Alternative is unlikely to negatively affect any low-income or minority populations in the Study Area. It is likely to have the positive effect of removing or diverting a large amount of heavy truck traffic out of the downtown, more densely populated areas of

Presque Isle, thereby reducing noise and air quality impacts on the group that is currently most adversely affected.

The No-Build Alternative would not adversely affect any low income or minority populations, but also would not provide any economic or environmental benefit.

4.2.4 Population, Demographics, and Economics

The Preferred Alternative would create a shorter, more direct route for shippers to reach Huber's and McCain's facilities in Easton, which are two of the most important manufacturing businesses in the region. Shortened travel times reduce costs for businesses that either directly transport items or rely on commercial carriers to supply raw materials and ship finished products. For industries with relatively high transportation cost structures, a reduction in shipping costs may positively impact their competitiveness, sales and resulting employment. For these reasons, the Preferred Alternative is likely to have an overall positive influence on the local economy and, in turn, help to maintain population and increase labor force.

The No-Build Alternative would result in the continued inadequate transportation network that currently serves the industrial area of Easton, and therefore could have an adverse effect on transportation costs and the regional economy.

4.2.5 Utilities

Construction of the Preferred Alternative would affect several utilities. The upgrade of Conant Road would require the relocation of approximately 5.1 kilometers (3.2 miles) of overhead electric and phone lines to the new edge of roadway. Overhead electric and phone lines along State Street would also need to be modified where the new location roadway would cross. A Maine Public Service Company electric transmission line crosses Conant Road approximately 0.8 kilometers (0.5 miles) west of the intersection with Station Road. MDOT will coordinate with Maine Public Service Company if, as a result of the Preferred Alternative, there are impacts to utilities to ensure that utility services are not disrupted.

MDOT will coordinate with McCain's regarding potential impacts from the construction of the Preferred Alternative to its underground process water main located under Conant Road approximately 2.4 kilometers (1.5 miles) west of Station Road. Should the water main need to be relocated, MDOT will coordinate with McCain's so as to minimize any possible interference with its plant operations.

The No-Build Alternative would not affect any utilities.

4.3 Natural Environment

This section discusses the Preferred Alternative's potential impacts to the natural environment including: geography and soils; aquatic resources including water quality, waterbodies and waterways, wetlands, and floodplains; vegetation; fisheries and wildlife. As discussed in Chapter 3, there are no surface or groundwater public drinking water supplies within the Study Area, nor are there any Threatened or Endangered Species. Therefore, these resources are not discussed.

4.3.1 Physical Geography and Soils

The Preferred Alternative is not expected to affect geography other than within the areas of roadway cut and fill that are needed to obtain acceptable vertical geometry along the new location roadway, and to correct substandard geometry along Conant Road. Drainage patterns are also not expected to be affected because stream crossings will be constructed with adequately sized culverts able to maintain existing drainage patterns.

The No-Build Alternative would not affect geography or soils.

4.3.2 Aquatic Resources

This section discusses the potential impacts on aquatic resources including surface and groundwater supplies, wetlands, and waterways from the Preferred Alternative, as well as the potential mitigation measures for these impacts. The No-Build Alternative would have no affect on aquatic resources.

4.3.2.1 Water Quality

Stormwater runoff from roadways can contribute metals, hydrocarbons, salts, sediments, and other substances to surface waters and groundwater. The accumulation of pollutants from vehicles on roadway surfaces is primarily dependent upon vehicle traffic volumes. During storm events, the substances that have accumulated on the roadways are carried in runoff into the drainage system and into receiving waters.

The pollutants carried in roadway runoff may have adverse effects on the aquatic ecosystem if they occur within surface waters in sufficient concentrations. According to a report titled *Effects of Highway Runoff on Receiving Waters* (FHWA/RD-84/062-066, June 1985), pollutants generated by traffic volumes under 30,000 vehicles per day exert minimal to no effect on the aquatic components of most surface waters and groundwater, although the size of the watershed relative to the amount of stormwater discharge is also an important factor in assessing impacts. In general, annual pollutant loads from roadways are low relative to the entire watershed.

The Preferred Alternative is expected to attract 1,320 vehicles per day in 2023, substantially less than the 30,000 vehicles per day threshold. Therefore, the Preferred Alternative is not expected to have an adverse impact on the quality of stormwater runoff. Despite this, since the new location roadway portion of the project would be located within the watershed of the Aroostook River, which is designated a Priority Waterbody in the MDOT Best Management Practices (BMPs) Manual, more extensive BMPs to further protect the river shall be investigated.

4.3.2.2 Waterbodies and Waterways

Waterbodies and waterways are protected under state and federal wetlands regulations. In addition, these aquatic habitats are protected if they contain rare species. No rare species occur in the Study Area. However, roadway construction or upgrading existing roadways over streams and ponds may result in the following direct and indirect impacts to aquatic habitats:

- Stream channelization;
- Loss of bank structural complexity;
- Loss of stream flow complexity (riffles/pools);
- Shading from bridges;
- Blocking of fish passage;
- Alteration of water temperature;
- Reduction of water quality from roadway runoff impacts; and
- Alteration of stream hydrology.

These impacts may result in the loss of aquatic habitat (direct impacts) and decline in the quality of the habitat for fish and other aquatic organisms (indirect impacts). The analysis of direct impacts, for this phase of the study, is based on the number of perennial stream crossings and the number of lakes and ponds within each of the study corridors.

The segment of Conant Road to be upgraded has four stream crossings in culverts ranging from 0.9 to 1.4 meters (36 to 54 inches) in size. One of the crossings is Merritt Brook and two are tributaries to Merritt Brook. Merritt Brook flows north to Aroostook River. The fourth stream flows south, eventually reaching Prestile Stream in Easton. As currently aligned, the Preferred Alternative to be constructed between Route 163/167 and Conant Road would not cross any streams. There may be impacts to the headwaters of a tributary to the Aroostook River, and every effort will be made during final design to avoid and minimize these impacts. MDIF&W fishery biologists expect impacts to fisheries from the Preferred Alternative to be minimal (Dave Basley, pers. comm., January 2002).

The Aroostook River, which has been identified by MDEP for river and watershed restoration, is not expected to be adversely affected by the Preferred Alternative

because the alignment is not expected to substantially increase vehicle volumes in the area, rather it will reroute existing traffic. In addition, stormwater BMPs will be incorporated into the project design to ensure no adverse impacts to the Aroostook River.

Potential measures to avoid, minimize, and mitigate impacts at the stream crossings along Conant Road may include:

- Using bridges rather than culverts to maintain channel substrate, flow, and bank characteristics where possible; and
- Using retaining walls, riprap sideslopes, or mechanically stabilized earth slopes rather than fill slopes to minimize impact areas.
- Fish passage would be maintained by using open bottom or sunken culverts so that the natural streambed substrate continues to provide fisheries habitat. Baffles, weir structures, or "fish rocks" can also be incorporated into the design to slow flow velocities and create small pools for fish resting areas.

Additional potential mitigation measures may include bank and channel restoration of crossing areas to provide naturally vegetated banks and increase channel habitat. These measures shall provide stabilization to reduce erosion and sedimentation. Crossing structures would be designed to minimize impacts to wetlands and floodplains. Construction may be done during times of low-flows and appropriate measures to control erosion, as outlined in MDOT's manual, *Best Management Practices for Erosion and Sediment Control*, shall be employed to help protect water quality.

The design and construction of upgraded roadways over stream crossings may include more stringent measures to reduce indirect water quality impacts from roadway runoff. Roadway design may include measures to reduce alteration to stream hydrology and BMP's to treat stormwater runoff water quality and control flow velocities. Construction may include measures described in the MDOT BMP Manual for sensitive waterbodies, that includes the use of source control measures to reduce erosion in addition to sedimentation control to keep sediment out of waterbodies.

4.3.2.3 Wetlands

The Preferred Alternative would affect wetlands only along the Conant Road upgrade portion of the project. The new location roadway portion of the project would not affect any wetlands. The National Wetland Inventory (NWI) maps used to identify the wetland impacts along Conant Road may over or underestimate the amount of wetland impacts, particularly for forested wetlands. The impact estimate that was done, however, was based on a 30.5-meter (100-foot) width that is a conservative estimate (*i.e.*, maximum impact).

Potential impacts to wetlands can be classified as direct and indirect. Direct impacts are quantified as the amount of wetland filled as well as the loss of the principal

functions and values provided by those wetlands. Indirect impacts are not as easily quantifiable, but occur when wetland hydrology or quality is altered.

Based upon the conservative 30.5-meter (100-foot) impact width, the Preferred Alternative would require filling approximately 0.29 hectares (0.72 acres) of wetlands along Conant Road (See Table 4-1). [Figure 2-4, page 2-23](#), shows the location of the Preferred Alternative in relation to wetlands.

Table 4-1
Wetland Impacts from Preferred Alternative (Conant Road Upgrade)

Forested Wetland		Shrub Wetland		Emergent Marsh		Total	
Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
0.25	0.62	0.04	0.10	0	0	0.29	0.72

Indirect impacts to wetlands may occur when wetland hydrology or water quality is altered, and may cause changes in the extent of the wetland, its vegetation, wildlife habitat values, or performance of wetland functions. Indirect impacts are much more likely to occur in wetlands altered by new roadway construction compared to those along existing roads being widened. This is because wetlands that are adjacent to existing roads are likely to have diminished ability to support wildlife and lower water quality than wetlands in natural areas, and therefore, few new impacts may result from upgrades of existing roadways. Roadway construction may also affect wetlands and their functions unless measures are taken to prevent sedimentation.

During final design, steps shall be taken to avoid and minimize potential wetland impacts prior to review of potential mitigation measures. The first step in the mitigation process is avoidance. Since existing Conant Road directly crosses the wetland areas that would be disturbed, it will be difficult to avoid wetlands entirely. It may, however, be possible to avoid/minimize impacts by widening entirely on one side of Conant Road, or shifting the alignment to the side of the road where wetlands are less prevalent. Many measures can be used to further minimize wetland encroachment, such as steepening side slopes from the standard 1:2 to 1:1.⁹ The use of retaining walls, riprap sideslopes, or mechanically stabilized earth sideslopes to reduce encroachment may also be a practicable option depending on engineering feasibility and costs compared to the wetland impact reductions achieved.

Unavoidable impacts would be compensated for in accordance with the MDEP's Wetland Protection Rules if required. These regulations, promulgated under the Natural Resources Protection Act (38 M.R.A. Section 480 *et. seq.*), give preference for restoring and/or enhancing degraded wetlands in the vicinity of the Study Area over



⁹ Sideslope ratios are presented as rise over run. So 1:2 represents a one unit rise for each unit of lateral measure. Some readers may be more familiar with having the numbers reversed.

creation of new wetlands. MDOT shall study potential wetland restoration/compensation sites. MDOT shall coordinate with the MDEP and the ACOE to develop a suitable compensation plan, if required, that is able to meet regulatory requirements.

4.3.3 Floodplains

The Federal Emergency Management Agency (FEMA) flood studies and profiles were reviewed to determine the limits and elevations of floodplains and floodways within the Study Area. The FEMA maps were overlaid onto the Preferred Alternative and impacts were assessed within a 30.5 meter (100-foot) width along Conant Road and the segment of new location roadway.

Direct impacts from the loss of flood storage or new obstructions within the floodplain or floodway could include an increase in depth or duration of flooding, or increase the lateral extent of the flooding.

A portion of the proposed improvements to Conant Road may occur within the 100-year floodplain. Based upon a 30.5 meter (100-foot) impact width, approximate impacts are estimated to total 0.34 hectares (0.83 acres) at two locations of Merritt Brook and one of its tributaries along Conant Road. No portion of the new location roadway would affect the FEMA 100-year flood plain.

During the final design process, steps shall be taken to avoid (*e.g.* by shifting the alignment of Conant Road slightly) and minimize (*e.g.* by steepening roadway sideslopes) impacts to floodplains. If floodplain impacts are unavoidable, steps to mitigate impacts may be undertaken if required.

The No-Build Alternative would not affect any floodplain.

4.3.4 Vegetation

Most of the Study Area is cultivated, and impacts to natural upland communities are expected to be minor. Most impacts shall be to deciduous forest that occurs along Conant Road. No impacts to natural upland communities are anticipated along the new location roadway because this portion of the Preferred Alternative crosses through agricultural lands. Possible mitigation for impacts to vegetation would include minor shifts in the roadway alignment to avoid upland resources. These shifts would have to take into consideration impacts to farmlands and wetlands, and a decision would be based upon balancing impacts.

The No-Build Alternative would not affect vegetation.

4.3.5 Fisheries and Wildlife

Impacts to fisheries were assessed by evaluating stocked fisheries resources and fisheries habitat in the Study Area. None of the Study Area waterways or waterbodies are stocked by the MDIF&W. All waterways and waterbodies in the Study Area are assumed to provide some level of fisheries habitat because they are perennial and contain areas of dense overhanging vegetation.

Fisheries resources may be directly and indirectly affected by transportation projects. Direct impacts consist of loss of substrate from fill. Indirect impacts include increased pollutant and sediment loading from untreated roadway runoff. The Preferred Alternative may indirectly impact fisheries resources where the new location roadway crosses headwater areas of unnamed streams. Along Conant Road, impacts to fisheries resources are expected to be minor because streams adjacent to existing roads are assumed to consist of lower quality habitat than streams in undeveloped areas. Furthermore, stormwater runoff would be treated with Best Management Practices to prevent contamination of adjacent waterways.

Impacts to fisheries resources can be mitigated by providing unobstructed access between suitable habitat, as well as enhancing existing habitat. Planting shrubs and other overhanging vegetation at existing road crossings can enhance existing habitat by providing a more natural riparian corridor. Oversized stream culverts can be constructed along upgraded roads and new alignments. Constructing these culverts as open bottom or sunken box culverts ensures that a natural substrate is maintained for fish species.

For the purposes of this analysis, forested, shrub, and herbaceous cover types were assumed to provide wildlife habitat, while agricultural, developed, and unvegetated areas do not. Because construction of the Preferred Alternative would take place almost entirely in areas that are either developed or in agricultural use, it is not expected to result in the loss of wildlife habitat. Some very minor losses to wildlife habitat may occur along Conant Road. This would be low quality habitat because of its proximity to the road.

The No-Build Alternative would not affect fisheries or wildlife.

4.4 Atmospheric Environment

4.4.1 Air Quality

No increase in emissions would result from the Preferred Alternative. No air quality impacts are anticipated based on the results of the CO air quality analysis. Refer to Appendix D for details on the air quality impact analysis that was performed. A

positive effect is expected in the downtown area of Presque Isle as a result of less truck traffic having less emissions and a reduction in particulate matter and thus would not exacerbate the existing PM-10 maintenance area.

4.4.2 Noise

The noise analysis predicted future sound levels for five locations in the Study Area.¹⁰ The analysis predicted changes in sound levels for the future No-Build Alternative and the Preferred Alternative based on changes in traffic volumes, vehicle speeds, truck percentages, and roadway geometry.

4.4.2.1 No-Build Alternative

The receptor locations along the Preferred Alternative are predicted to experience peak hour sound levels that vary from 61.7 to 68.7 dBA under the No-Build Alternative. As shown in Table 4-2 (page 4-12), all five receptor locations are predicted to experience peak sound levels that are below the NAC under the future No-Build Alternative. One receptor location (T1) is predicted to experience an increase of 7.7 dBA over existing sound levels. The increase at this receptor, on Hoyt Road, reflects the continued use of Route 163 by heavy truck traffic under the No-Build Alternative. Under the No-Build Alternative, one receptor location is predicted to experience no change from existing sound levels, while the other three receptor locations are expected to experience decreases of 2 to 12 dBA. These decreases reflect the current practice of restricting heavy truck traffic along Conant, Burlock, and Marston Roads.

4.4.2.2 Preferred Alternative

Under the Preferred Alternative, the receptor locations are predicted to experience peak hour sound levels that vary from 53.1 to 70.3 dBA (compared to 63.1 to 79.4 under existing conditions), with all predicted sound levels below the NAC. Compared to the No-Build Alternative, three receptors (T1, T3, and T5) are predicted to have lower sound levels, with decreases ranging from 2.5 to 8.6 dBA. These decreases reflect the diversion of truck traffic from Burlock Road and Marston Road to the proposed Easton Industrial Access Road. Two receptors are predicted to experience slight increases of 1.6 dBA and 2.4 dBA over the No-Build Alternative sound levels. These increases are due to heavy truck traffic that would continue to use Route 163/167 and the upgraded Conant Road. Table 4-2 (page 4-12) presents the modeled sound levels for the future No-Build Alternative and Preferred Alternative.



¹⁰ One location (T5) in downtown Presque Isle is actually outside of the Study Area, but is included in order to better assess one aspect of the Purpose and Need which is to improve conditions in downtown Presque Isle.

Table 4-2
2023 Predicted Sound Levels

Receptor Number	Receptor Location ¹	A-Weighted Sound Level in Decibels (dBA)			
		FHWA Criterion	2001 Existing L _{eq}	2023 No-Build Alternative L _{eq}	2023 Build Alternative H-L-Conant L _{eq}
T 1	Route 163 at Hoyt Road	67	56.8	64.5	62.0
T 2	Route 163/167 at Washburn Junction	72	71.2 ²	68.7	70.3
T 3	Burlock Road at Route 163/167	67	66.0 ²	61.7	53.1
T 4	Conant Road between Route 10 and Allen Rd	67	63.1	62.9	65.3
T 5	Route 1 between State St. and Academy St.	67	79.4 ²	67.4 ²	64.5

¹ The monitoring sites are depicted in Figure 3-2 (page 3-15).

² This sound level approaches or exceeds the FHWA noise abatement criterion.

Source: VHB, Inc.

4.4.2.3 Conclusions

Three of five receptor locations modeled in the Easton Industrial Access Road Study Area currently experience sound levels that approach, are at, or exceed the FHWA's Noise Abatement Criteria (NAC). The noise analysis demonstrated that only one receptor location (T1) is predicted to experience a moderate increase in sound levels under the No-Build Alternative, and all but one receptor location (T5) are predicted to experience No-Build sound levels below the NAC. Under the Preferred Alternative, three of the modeled receptors are predicted to experience decreased sound levels (T2, T3, and T5), and two receptors (T1 and T4) would experience slightly increased sound levels, compared to the No-Build Alternative. All of the Preferred Alternative sound levels are below the NAC. None of the Preferred Alternative sound levels would result in an adverse noise impact at any of the modeled receptor locations.

4.5 Transportation Environment

This section quantifies the impacts and benefits of the Preferred Alternative relative to the Study Area's transportation environment. This section assesses the potential effects on demand, travel time/distance savings, vehicle-miles traveled (VMT) and vehicle-hours traveled (VHT), and system continuity/mobility.

4.5.1 Projected Demands

The Preferred Alternative is expected to carry 1,320 vehicles per day. This demand includes approximately 280 trucks per day (21 percent). The Preferred Alternative is expected to result in less traffic on Route 1 through downtown Presque Isle, on Burlock Road/Marston Road, and on the portion of Conant Road between Route 10

and the new location roadway segment of the Preferred Alternative. These reductions are as follows:

- Traffic through downtown Presque Isle is expected to decrease by 890 vpd (5 percent) for all vehicles and by 240 vpd (11 percent) for trucks.
- Traffic on Conant Road between Route 10 and the new location roadway segment of the Preferred Alternative is expected to decrease by 540 vpd (36 percent) for all vehicles and by 140 vpd (70 percent) for trucks.
- Traffic on Burlock Road/Marston Road is expected to decrease by 430 vpd for all vehicles (43 percent) and by 40 vpd for trucks (40 percent).

4.5.2 Travel Time/Travel Distance

The Preferred Alternative is expected to reduce the travel times and distances to the Easton industrial area from the north and west. From Route 1 (north of Presque Isle) to Conant Road/Station Road, the Preferred Alternative saves approximately six minutes and 1.1 kilometers (0.7 miles) as compared to the existing travel route through downtown Presque Isle. Travel time and travel distance benefits are not expected from the south and east of the Easton industrial area.

4.5.3 VMT/VHT

The Preferred Alternative results in a shorter and faster route for trips to the Easton industrial area from the north and west of Presque Isle. The VMT for these trips is expected to decrease by 96,800 annual vehicle-miles (6 percent) for all vehicles and by 15,800 annual vehicle-miles (4 percent) for trucks compared to the No-Build Alternative. The VHT for these trips is expected to decrease by 21,800 annual vehicle-hours (38 percent) for all vehicles and by 5,500 annual vehicle-hours (37 percent) for trucks compared to the No-Build Alternative. VMT/VHT benefits are not expected from the south and east of the Easton industrial area.

4.5.4 System Continuity and Mobility

The Preferred Alternative would improve continuity and mobility to the Easton industrial area from the north and west of Presque Isle. The Preferred Alternative would save approximately 6 minutes to the Easton industrial area and would improve conditions through downtown Presque Isle by diverting 890 vehicles per day (a 5 percent reduction) from Route 1 (Main Street) compared to the No-Build Alternative. More importantly, the Preferred Alternative would divert 240 heavy trucks per day from downtown Presque Isle – a reduction of 11 percent compared to the No-Build Alternative. VMT and VHT would both decrease because the Preferred Alternative provides a shorter and faster route to Easton from the north and west of Presque Isle.

The Preferred Alternative would also encourage use of Maysville Street (Route 163), a northern bypass of downtown Presque Isle that is a limited access highway designed to accommodate heavy truck weights. The Preferred Alternative would act as an easterly bypass of downtown Presque Isle and coupled with the Maysville Street (Route 163) north bypass would help divert regional through traffic away from downtown Presque Isle, divert heavy truck traffic from residential areas (*i.e.*, Burlock Road/Marston Road), and eliminate circuitous routes taken when Conant Road and Burlock Road/Marston Road are posted in the spring.

4.6 Temporary Construction Impacts

Potential temporary impacts during construction include increased air and noise impacts, erosion/sedimentation, impacts to wildlife, and traffic disruptions.

Impacts to air quality from construction equipment emissions (NO_x, sulfur oxides, and CO) and increases in particulate matter (*i.e.*, dust) would be temporary, localized, and minimal. Mitigating fugitive dust emissions involves curbing or eliminating its generation. Mitigation measures that may be used in highway construction include wetting and stabilization to suppress dust generation, cleaning paved highways, and scheduling construction to minimize the amount and duration of exposed earth.

Noise impacts from construction activities are closely related to the phase of construction and the type and placement of construction equipment. Construction activities may result in a substantial but temporary noise impact to receptors at various locations adjacent to proposed construction. Noise levels may vary depending on the type and number of pieces of equipment active at any one time. It is expected that noise levels exceeding 67 decibels could occur up to 152 meters (500 feet) away from construction activities. In general, construction noise may be restricted to daylight hours.

Erosion and sedimentation control plans would be prepared for the project. The Stormwater Pollution Prevention Plan (SWPPP) required by NPDES shall identify potential source areas and describe what measures will be employed as erosion control, sedimentation control, temporary stormwater management measures, dust control and winter stabilization measures.

Human presence during construction and the associated construction noise may temporarily displace some species of wildlife from the edge of the right-of-way. The noises associated with construction also may mask territorial vocalizations of bird species near the roadway, interfering at least temporarily with breeding. Amphibians, which breed more commonly at dusk or night, are less likely to be indirectly affected. Construction in forested areas may result in the mortality of

amphibians, reptiles and small mammals within the work zone, and the loss of nesting birds (if construction is initiated during nesting season).

Traffic impacts shall be minimized during construction. Conant Road will remain open at all times, although, it may be necessary to restrict traffic to one lane. Police details would be used to direct traffic during these short-term lane restrictions.

Coordination and Consultation

NEPA regulations require the solicitation of views of other state and federal agencies during the preparation of an Environmental Assessment, and provide early and continuing opportunities for the public to be involved in the identification of social, economic and environmental impacts. This chapter summarizes the coordination with regulatory and other governmental agencies.

Appendix C contains copies of meeting notes, meeting announcements, handouts, etc. that are pertinent to the agency and public consultation process.

5.1 Federal, State and Local Agency Coordination

5.1.1 Scoping

The Federal Highway Administration (FHWA) and the Maine Department of Transportation (MDOT) have solicited the input of other state and federal agencies through interagency meetings and correspondence.

5.1.2 Interagency Coordination

The Study Team coordinated with federal and state agencies to obtain information on environmental conditions, review potential impacts, and obtain agency input. These agencies included the Natural Resource Conservation Service (NRCS), Maine Department of Inland Fisheries and Wildlife (MDIF&W), Maine Department of Environmental Protection (MDEP), U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), the Maine State Planning Office (MSPO), and the Maine Natural Areas Program (MNAP) within the Maine Department of Conservation . The responses from the Maine Historic Preservation Commission

(MHPC) and U.S. Fish and Wildlife Service are included with this Draft EA in Attachment A.

MDOT also presented information regarding the screening process and selection of the Preferred Alternative at its Interagency Coordination Meetings on July 10, and September 11, 2001. These meetings were attended by representatives of MDEP, USFWS, MDIF&W, the U.S. Army Corps of Engineers (ACOE), and the U.S. Environmental Protection Agency (EPA), the Maine Historic Preservation Commission, as well as members of the press and public. The purpose of the first meeting was to introduce the project to the review agencies and get their feedback regarding the range of alternatives being studied (*i.e.*, the original 11 alternatives) and discuss any special concerns (there were none). The second meeting presented the results of the screening analysis and indicated that either Hm/L-Conant or Alternative 2A would be the Preferred Alternative. The attendees had little to comment on the alternatives analysis.

5.2 Public Involvement

5.2.1 Public Information Meetings

On December 27, 2000, MDOT held a Public Informational Meeting regarding their original proposal for the Study that would have constructed a new road along the route identified as Alternative 3 in this Draft EA. At this meeting a number of issues were identified, in particular the potential to disrupt waterfowl habitat at Christina Reservoir and concerns about increased heavy truck traffic along Route 163. Other concerns were about potential impacts to residential properties, and general safety issues related to truck traffic.

A public information meeting was held at the Easton High School on August 16, 2001. The purpose of this meeting was to get the public's input on the alternatives analysis as it stood then (at which time there were three alternatives still being strongly considered Hm/L-Conant, Alternative 2A, and Alternative Km). Notes from this meeting are presented in Appendix C. Again, most people were concerned about increased traffic on Route 163 that might result from Alternative 2A. Other commenters were pleased that Alternative 1 had been eliminated due to concerns about farmland impacts.

Once this Draft EA is published, a Public Hearing shall be held.

5.2.2 Coordination with Communities and Organizations

MDOT has coordinated with the local communities and local organizations throughout the study to obtain information on existing conditions as well as transportation and economic needs, and to obtain input on the corridor screening process. In addition to the general public, meetings were held with the following communities and agencies:

- City of Presque Isle;
- Town of Easton;
- Town of Fort Fairfield;
- Maine Potato Board;
- Northern Maine Development Commission; and
- Local representatives of the Maine Department of Inland Fisheries and Wildlife

Available notes from these meetings are presented in Appendix C. In general, the concerns raised at these meetings were related to each stakeholders interest in the Study. For example, the Maine Potato Board was chiefly concerned with potential impacts to farmland, while MDIF&W was concerned chiefly with potential wetland impacts and impacts to the waterfowl habitat at Christina Reservoir. The municipalities were primarily interested in the areas of safety. Presque Isle is particularly concerned with reducing the amount of truck traffic in the downtown. NMDC was supportive of the project.

Preparers

Federal Highway Administration

James F. Linker

Mr. Linker is the Manager of the Environmental Program at the Maine Division of FHWA. He has over 30 years experience in FHWA Right of Way and Environmental programs. Mr. Linker provided the study team procedural guidance and technical advice to assure compliance of the environmental analysis with federal requirements. He received a B.A. in History from the American University, Washington, D.C.

Maine Department of Transportation

Raymond Faucher, P.E.

Mr. Faucher is the Manager of the Biennial Transportation Improvement Program (BTIP) and Major Projects Unit in the MDOT's Planning Division and has extensive experience in managing NEPA studies throughout the State of Maine for the MDOT. Mr. Faucher served as project manager for the Easton Industrial Access Road Study and was responsible for managing and coordinating the consultant and study activities. He received an A.S. in Civil Engineering from the University of Maine and is a registered Professional Engineer in the State of Maine

Judith Lindsey-Foster

Ms. Lindsey-Foster is an Environmental Planner and Community Impact Assessment specialist within the MDOT's Planning Division, BTIP and Major Projects Unit. She has extensive knowledge related to compliance with NEPA regulations and policies, and documentation requirements. Ms. Lindsey-Foster served as assistant to the Project Manager for the Easton Industrial Access Road Study responsible for managing MDOT's technical document review and regulatory compliance. She received a B.S. in Environmental Planning from Unity College.

Martin Rooney

Mr. Rooney is the Regional Planner for Aroostook County. Prior to joining MDOT, he worked as a financial planner with the New York City Office of Management and

Budget. Mr. Rooney holds a Masters of Public Administration from Syracuse University and a B. A. in Government and Politics from George Mason University.

Richard D. Bostwick

Mr. Bostwick is Supervisor of Field Studies for MDOT. He has 17 years of experience in the review of transportation-related environmental and NEPA documents, and reviewed the natural environment sections of the Draft EA. Mr. Bostwick has a B. Sc. in Biology from Mount Allison University.

Peter Newkirk, P.E.

Mr. Newkirk is Supervisor of Surface Water Resources at MDOT. He has over 13 years of professional experience, and worked for the USDA Natural Resources Conservation Service prior to joining MDOT. He reviewed the surface water resources sections of the Draft EA. Mr. Newkirk holds an Associates Degree in Biology and a B. S. in Civil Engineering.

Michael Morgan

Mr. Morgan is a Senior Technician with the Transportation Analysis Section of the Bureau of Planning. He was responsible for the review of the transportation and economics analysis for the Easton Industrial Access Road Study. Mr. Morgan has over 30 years of experience in transportation analysis. He received an Associate Degree in Civil Engineering from the University of Maine.

Brian Keezer

Mr. Keezer is an Assistant Engineer in the BTIP and Major Projects Unit of the MDOT's Planning Division. He technically reviewed the Easton Industrial Access Road DEA. He has most recently worked as a facility engineer for the Maine National Guard. Mr. Keezer holds a Bachelor of Science Degree in Civil Engineering from the University of Maine.

Clifton Curtis

Mr. Curtis is a Project Manager of the BTIP and Major Projects Unit in the MDOT's Planning Division. He has 12 years of professional experience in transportation design, landscaping, and erosion and sedimentation control. He has reviewed portion of this Draft EA. Mr. Curtis holds a B.S. in Forest Engineering and a M.S. in Business.

Donald W. Craig

Mr. Craig is a Transportation Planner with the Environmental Coordination and Analysis Section of the Bureau of Planning. He is responsible for managing the activities associated with the MDOT's response to the Clean Air Act of 1990, the Congestion Mitigation Air Quality (CMAQ) Program, NEPA project level air quality

analysis and noise analysis. Prior to arriving at the Maine DOT, Don had retired after 25 years in the US Air Force. Don holds a BA in History, Master of Arts in Education and a Masters in Public Administration.

Vanasse, Hangen, Brustlin, Inc.

Ruth Bonsignore, P.E.

Ms. Bonsignore, Managing Director of VHB's Transportation Systems Department, has managed and participated in dozens of transportation planning studies, including several Maine corridor and transportation improvement projects. Ms. Bonsignore had primary responsibility for the transportation analyses, identification and evaluation of corridor alternatives for this study. Ms. Bonsignore received a B.S. from the University of Massachusetts, and a M.S. from the Massachusetts Institute of Technology.

David Hewett

Mr. Hewett is a project manager in VHB's Environmental Division where he works almost exclusively on public infrastructure projects. Mr. Hewett was responsible for overall coordination of the document. Mr. Hewett has over 15 years of experience in environmental regulation and permitting. He has applied his expertise on a wide variety of projects including, roads, natural gas and electric transmission lines, and wireless telecommunications facilities. Mr. Hewett received a Bachelor of Arts degree in Biology from Middlebury College in Vermont.

Joseph Wanat, P.E.

Mr. Wanat is a transportation engineer with a range of experience in traffic impact studies and corridor studies. He was responsible for the transportation analysis for this document. Mr. Wanat received a Bachelor of Science in Civil and Environmental Engineering from the University of Massachusetts-Amherst and a Master of Science in Civil and Environmental Engineering from the University of California-Berkeley.

Thomas Wholley

Mr. Wholley is a Senior Air and Noise Quality Engineer. He was responsible for the preparation of air quality and noise analysis for this document. Mr. Wholley received a Bachelor of Science degree in Civil Engineering from the University of Massachusetts Lowell.

Delia Kaye

Ms. Kaye is a Senior Environmental Scientist with experience in wetlands ecology, wildlife habitat analysis, and the design of wildlife corridors for transportation infrastructure projects. She was responsible for the natural resources sections of this

document. Ms. Kaye received a Bachelor of Science degree in Wildlife Biology from the University of Vermont.

Samuel Moffett

Mr. Moffett is an Environmental Planner with experience in preparing environmental review documents and permit applications for public and private infrastructure projects including roads, power transmission facilities, and natural gas pipeline projects. He assisted with the environmental constraint analysis and overall document coordination. Mr. Moffett received a Bachelor of Liberal Arts degree with a concentration in Government from Harvard University, and Master of Arts degree in Urban and Environmental Policy from Tufts University.

Michael Baker Corporation

Christopher Gesing, P.E.

Mr. Gesing is a Project Manager with extensive transportation engineering, environmental compliance and Geographic Information Systems (GIS) experience. He had primary responsibility for the development of the GIS database that was used for the study. Mr. Gesing received a M. S. and B. S. in Civil Engineering from Youngstown State University.

Langille Aroostook Engineering Group

Janet Packard, P.E.

Ms. Packard is President of Langille Aroostook Engineering Group, Inc. of Presque Isle, Maine. She oversees civil and environmental engineering conducted by the firm. Ms. Packard was responsible for the sections of the Draft EA dealing with land use, right-of-way, and utilities. She also oversaw traffic data collection.

Draft EA Recipients

Federal

Department of Agriculture
Department of the Army, Corps of Engineers – Maine Field Office
U.S. Fish and Wildlife Service
Natural Resource Conservation Service
Environmental Protection Agency
National Marine Fisheries Service

State

Maine Department of Agriculture
Maine Department of Conservation
Maine Department of Community and Economic Development
Maine Department of Environmental Protection
Maine Department of Inland Fisheries and Wildlife
Maine Forest Service
Maine Historic Preservation Commission
Maine Natural Areas Program
Maine State Planning Office
Maine Atlantic Salmon Commission

Elected Officials

U.S. Senator Olympia Snowe
U.S. Senator Susan Collins

U.S. Representative Thomas H. Allen

U.S. Representative John Baldacci

State Senator Richard Kneeland

State Representative Edgar Wheeler

State Representative Jacqueline A. Lundeen

State Representative Richard H. Duncan

Regional Agencies

Northern Maine Development Commission

Aroostook County Commission

Local Communities

Copies of the Draft EIS have been distributed to the Town or City Hall and municipal library of Presque Isle, Easton, and Fort Fairfield.

Other Interested Parties

Association of Aroostook Chambers of Commerce

Leaders Encouraging Aroostook Development (LEAD)

Regional Transportation Advisory Committee (RTAC)

Appendix A

Agency Correspondence



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Maine Field Office
1033 South Main Street
Old Town, ME 04468-2023
(207) 827-5938



To: Delia Kaye
Vanasse Hangen Brustlin, Inc.
PO Box 9151
Watertown, MA 02471-9151

August 23, 2001

Thank you for your letter requesting information or recommendations from the U.S. Fish and Wildlife Service. This form provides the Service's response pursuant to Section 7 of the Endangered Species Act (ESA), as amended (16 U.S.C. 1531-1543), and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667d).

Re: Easton Industrial Access Road Study / Easton / Aroostook
Project Name/Location/County

August 13, 2001

Date of Receipt of Incoming Letter

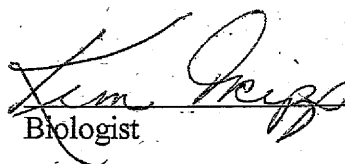
01-0251

Log Number

Based on the information currently available to us, no federally-listed species under the jurisdiction of the Service are known to occur in the project area, with the exception of occasional, transient bald eagles (*Haliaeetus leucocephalus*). Accordingly, no further action is required under Section 7 of the ESA, unless: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

A list of federally-listed species in Maine is enclosed for your information. Please contact the Maine Department of Inland Fisheries and Wildlife and Maine Natural Areas Program for an up to date account of state-listed species in the project area.

If you have any questions, please call Kim Tripp at (207) 827-5938.


Biologist

8/24/01
Date



ANGUS S. KING, JR.
GOVERNOR

MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

7648
EARLE G. SHETTLEWORTH, JR.
DIRECTOR

August 27, 2001

Delia Kaye
VHB
101 Walnut Street
P. O. Box 9151
Watertown, MA 02471-9151

Project: MHPC #2351 - Easton Industrial Access Road Study
Location: Presque Isle, Fort Fairfield & Easton, Maine

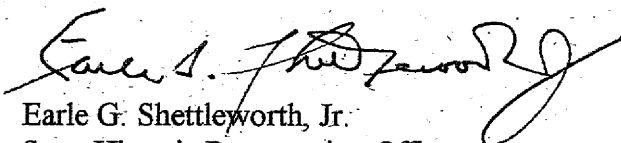
Dear Ms. Kaye:

In response to your recent request, I have reviewed the information received August 13, 2001 to continue consultation on the above referenced project. We are reviewing this project pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

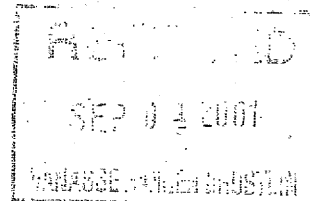
Based upon the scope of work for this project and the project location, no additional identification efforts are warranted at this time as there is adequate documentation for a finding on historic properties. Our office feels that the subject property and area of potential effects does not contain resources eligible for listing in the National Register of Historic Places. Therefore, I find no historic properties [historic, architectural or archaeological] affected by this project.

Please contact Dana R. Vaillancourt of my staff if you require further assistance in this matter.

Sincerely,


Earle G. Shettleworth, Jr.
State Historic Preservation Officer

EGS/drv



A-3

PHONE: (207) 287-2132



PRINTED ON RECYCLED PAPER

FAX: (207) 287-2335



REPLY TO
ATTENTION OF

Regulatory Division
CENAE-R-51

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

File
EAs for
6462.11

OCT 12 2001

David Gardiner
Office of Environmental Services
Maine Dept. of Transportation
16 State House Station
Augusta, Maine 04333

Dear Mr. Gardiner:

This is in reference to your proposal to construct a new access road to an existing industrial park at Easton, Maine.

Based on presentations at several monthly interagency meetings with your staff and Federal and State regulatory and resource agencies, we have determined that the basic project purpose of the project is to improve truck access to the Easton Industrial Park at Easton, Maine. Improved access should reduce truck traffic in downtown Presque Isle, improve public safety, and improve the mobility of raw materials and finished product to and from the industrial park. This will be used as the "basic project purpose" in determining compliance with the 404(b)(1) guidelines.

If you have any questions concerning this matter, please contact Jay Clement at 207-623-8367 at our Manchester, Maine Project Office.

Sincerely,

Christine A. Godfrey
Chief, Regulatory Division

Copies Furnished:
Stephen Silva - EPA
Wende Mahaney - USFWS
Monica Daniels - NMFS
James Linker - FHWA
Stacie Beyer - Maine DEP

Appendix B

Traffic Analysis Modeling Data

Easton Industrial Access Road Study **Vehicle-Miles Traveled (VMT) Difference**

NON-TRUCKS

	NON-TRUCK DEMANDS			DISTANCE DIFFERENCE (miles)										
	2000 1-WAY Total	2000 2-WAY	2023 2-WAY	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
PATH 1	34,750	69,500	97,661	-0.64	-0.44	-0.61	-0.81	-0.78	0.09	0	-0.04	0.55	-0.66	0.09
PATH 2	34,750	69,500	97,661	-0.15	0.06	-0.11	-0.32	-0.28	0.59	0.49	0.45	1.04	-0.17	0.59
Total	69,500	139,000	195,321											

ANNUAL VMT DIFFERENCE (vehicle-miles)														
	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K			
PATH 1	-62,503	-42,971	-59,573	-79,105	-76,175	8,789	0	-3,906	53,713	-64,456	8,789			
PATH 2	-14,649	5,860	-10,743	-31,251	-27,345	57,620	47,854	43,947	101,567	-16,602	57,620			
Total	-77,152	-37,111	-70,316	-110,357	-103,520	66,409	47,854	40,041	155,280	-81,058	66,409			

TRUCKS

	TRUCK DEMANDS			DISTANCE DIFFERENCE (miles)										
	2000 1-WAY Total	2000 2-WAY	2023 2-WAY	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
PATH 3	4,797	9,594	12,452	0.68	0.89	0.72	0.51	0.55	1.42	1.33	1.29	1.88	0.66	1.42
PATH 1	13,076	26,151	33,940	-0.64	-0.44	-0.61	-0.81	-0.78	0.09	0	-0.04	0.55	-0.66	0.09
PATH 2	3,613	7,227	9,379	-0.15	0.06	-0.11	-0.32	-0.28	0.59	0.49	0.45	1.04	-0.17	0.59
Total	25,769	51,539	66,890											

ANNUAL VMT DIFFERENCE (vehicle-miles)														
	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K			
PATH 3	8,467	11,082	8,966	6,351	6,849	17,682	16,561	16,063	23,410	8,218	17,682			
PATH 1	-21,722	-14,934	-20,704	-27,492	-26,473	3,055	0	-1,358	18,667	-22,401	3,055			
PATH 2	-1,407	563	-1,032	-3,001	-2,626	5,534	4,596	4,221	9,754	-1,594	5,534			
Total	-14,661	-3,289	-12,770	-24,142	-22,251	26,270	21,157	18,926	51,831	-15,777	26,270			

TOTAL (TRUCKS AND NON-TRUCKS)

ANNUAL VMT DIFFERENCE	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
YEARLY	-91,813	-40,400	-83,085	-134,499	-125,771	92,680	69,011	58,967	207,112	-96,835	92,680

PATH 1 - Route 1 to Academy Street to Conant Road to Station Road to Richardson Road

PATH 2 - Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road

PATH 3 - Industrial Park to State Road to Parsons Street to State Street to Route 1 to Academy Street to Conant Road to Station Road to Richardson Road

Easton Industrial Access Road Study **Vehicle-Hours Traveled (VHT) Difference**

NON-TRUCKS

	NON-TRUCK DEMANDS			TIME DIFFERENCE (min)									
	2000 1-WAY Total	2000 2-WAY	2023 2-WAY	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant K
PATH 1	34,750	69,500	97,661	-6	-5	-5	-5	-5	-3	-3	-3	-3	-6 -3
PATH 2	34,750	69,500	97,661	-4	-3	-3	-3	-3	-1	-1	-1	-1	-4 -1
Total	69,500	139,000	195,321										

	ANNUAL VHT DIFFERENCE (vehicle-hours)										
	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
PATH 1	-9,766	-8,138	-8,138	-8,138	-8,138	-4,883	-4,883	-4,883	-4,883	-9,766	-4,883
PATH 2	-6,511	-4,883	-4,883	-4,883	-4,883	-1,628	-1,628	-1,628	-1,628	-6,511	-1,628
Total	-16,277	-13,021	-13,021	-13,021	-13,021	-6,511	-6,511	-6,511	-6,511	-16,277	-6,511

TRUCKS

	TRUCK DEMANDS			TIME DIFFERENCE (min)									
	2000 1-WAY Total	2000 2-WAY	2023 2-WAY	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant K
PATH 3	4,797	9,594	12,452	-2	-1	-1	-1	-1	1	1	1	1	-2 1
PATH 4	960	1,920	2,492	-5	-4	-4	-4	-4	-2	-2	-2	-2	-5 -2
PATH 1	13,076	26,151	33,940	-6	-5	-5	-5	-5	-3	-3	-3	-3	-6 -3
PATH 5	3,323	6,647	8,626	-6	-5	-5	-5	-5	-3	-3	-3	-3	-6 -3
PATH 2	3,613	7,227	9,379	-4	-3	-3	-3	-3	-1	-1	-1	-1	-4 -1
Total	25,769	51,539	66,890										

	ANNUAL VHT DIFFERENCE (vehicle-hours)										
	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
PATH 3	-415	-208	-208	-208	-208	208	208	208	208	-415	208
PATH 4	-208	-166	-166	-166	-166	-83	-83	-83	-83	-208	-83
PATH 1	-3,394	-2,828	-2,828	-2,828	-2,828	-1,697	-1,697	-1,697	-1,697	-3,394	-1,697
PATH 5	-863	-719	-719	-719	-719	-431	-431	-431	-431	-863	-431
PATH 2	-625	-469	-469	-469	-469	-156	-156	-156	-156	-625	-156
Total	-5,505	-4,390	-4,390	-4,390	-4,390	-2,160	-2,160	-2,160	-2,160	-5,505	-2,160

TOTAL (TRUCKS AND NON-TRUCKS)

ANNUAL VHT DIFFERENCE	1	1A	1B	2	2A	2B	3	3A	3B	H/L-Conant	K
YEARLY	-21,781	-17,411	-17,411	-17,411	-17,411	-8,671	-8,671	-8,671	-8,671	-21,781	-8,671

PATH 1 - Route 1 to Academy Street to Conant Road to Station Road to Richardson Road
 PATH 2 - Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road
 PATH 3 - Industrial Park to State Road to Parsons Street to State Street to Route 1 to Academy Street to Conant Road to Station Road to Richardson Road
 PATH 4 - Industrial Park to State Road to Parsons Street to State Street to Route 1 to Route 10 to Richardson Road
 PATH 5 - Route 1 to Academy Street to Route 10 to Richardson Road

Easton Industrial Access Road Study

Projected Demand Shifts

2023 Daily Traffic Demand Shifts (vehicles per day)

ALTERNATIVE	Route 1 (Main Street) between State Street and Route 10 (Academy Street)		
	NON-TRUCKS	TRUCKS	TOTAL
No ACTION	15900	2100	18000
1	-647	-240	-887
1A	-647	-240	-887
1B	-647	-240	-887
2	-647	-240	-887
2A	-647	-240	-887
2B	-647	-179	-826
3	-647	-179	-826
3A	-647	-179	-826
3B	-647	-179	-826
H/L-CONANT	-647	-240	-887
K	-647	-179	-826

ALTERNATIVE	Burlock Road/Marston Road		
	NON-TRUCKS	TRUCKS	TOTAL
No ACTION	900	100	1000
1	-394	-40	-434
1A	-394	-40	-434
1B	-394	-40	-434
2	-394	-40	-434
2A	-394	-40	-434
2B	-197	-40	-237
3	-197	-40	-237
3A	-197	-40	-237
3B	-197	-40	-237
H/L-CONANT	-394	-40	-434
K	-197	-40	-237

ALTERNATIVE	Conant Road west of Marston Road		
	NON-TRUCKS	TRUCKS	TOTAL
No ACTION	1300	200	1500
1	-400	-141	-541
1A	-400	-141	-541
1B	-400	-141	-541
2	-400	-141	-541
2A	-400	-141	-541
2B	-400	-100	-500
3	-400	-100	-500
3A	-400	-100	-500
3B	-400	-100	-500
H/L-CONANT	-400	-141	-541
K	-400	-100	-500

ALTERNATIVE	TOTAL DEMAND		
	NON-TRUCKS	TRUCKS	TOTAL
No ACTION			
1	1041	280	1321
1A	1041	280	1321
1B	1041	280	1321
2	1041	280	1321
2A	1041	280	1321
2B	844	219	1063
3	844	219	1063
3A	844	219	1063
3B	844	219	1063
H/L-CONANT	1041	280	1321
K	844	219	1063

Easton Industrial Access Road Study

McCain Huber Trip Patterns

McCain/Huber Trips That Could Divert to Easton Industrial Access Roadway

CARS, YEARLY	2000		2023
Sum of year		2-way	2-way
route	Total		
Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	34750	69500	97882
Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road	34750	69500	97882
Grand Total	69500	139000	195764

CARS, DAILY

Sum of day			2023
route	Total	2-way	2-way
Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	140	280	394
Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road	140	280	394
Grand Total	280	560	789

McCain/Huber Trips That Could Divert to Easton Industrial Access Roadway

YEARLY TRUCKS	2000		2023
Sum of year		2-way	2-way
route	Total		
Industrial Park to State Road to Parsons Street to State Street to Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	4797	9594	12796
Industrial Park to State Road to Parsons Street to State Street to Route 1 to Route 10 to Richardson Road	960	1920	2561
Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	13076	26151	34879
Route 1 to Academy Street to Route 10 to Richardson Road	3323	6647	8865
Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road	3613	7227	9638
Grand Total	25769	51539	68739

DAILY TRUCKS	2000		2023
Sum of day		2-way	2-way
route	Total		
Industrial Park to State Road to Parsons Street to State Street to Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	19	38	51
Industrial Park to State Road to Parsons Street to State Street to Route 1 to Route 10 to Richardson Road	4	8	11
Route 1 to Academy Street to Conant Road to Station Road to Richardson Road	53	106	141
Route 1 to Academy Street to Route 10 to Richardson Road	14	28	37
Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road	15	30	40
Grand Total	105	210	280

Easton Industrial Access Road Study

Traffic Demand Estimate

Trips that would use Easton Industrial Access Road

	1988	1988	2023	2023
	Total AADT	Trucks, ADTT	Total AADT	Trucks, ADTT
Round trips from Maysville Study (1988) [1]	720	119	591	98
<i>Work/Work-related</i>	418	115	343	95
<i>Recreational</i>	180	4	148	3
<i>Shopping</i>	86	0	71	0
<i>Other</i>	36	0	30	0

	2000	2000	2023	2023
	Total AADT	Trucks, ADTT	Total AADT	Trucks, ADTT
Round trips from Huber/McCain Data [2]	765	210	1074	280
<i>Work/Work-related</i>	765	210	1074	280
<i>Recreational</i>	0	0	0	0
<i>Shopping</i>	0	0	0	0
<i>Other</i>	0	0	0	0

	2023	2023
	Total AADT	Trucks, ADTT
Total Round Trips	1323	283
<i>Work/Work-related [3]</i>	1074	280
<i>Recreational [4]</i>	148	3
<i>Shopping [4]</i>	71	0
<i>Other [4]</i>	30	0

[1] Presque Isle Maysville Connector Road Feasibility Study; Maine Department of Transportation Bureau of Planning; 1988

[2] Traffic Generation Survey at McCain and Huber conducted by MDOT in 2000.

[3] Assumed work trips from McCain and Huber survey

[4] Assumed non-work trips from Maysville Connector Study

Easton Industrial Access Road Study

Representative Trip Purpose Data

Route 163 (Presque Isle, at urban compact line) [1]

	Total Traffic	Truck Traffic
Work/Work-related	56%	97%
Recreational	26%	3%
Shopping	14%	0%
Other	4%	0%

Route 163 (Presque Isle, at Mapleton townline) [2]

	Total Traffic
Work/Work-related	63%
Recreational	13%
Shopping	13%
Other	11%

Route 1 (Presque Isle, south of the University of Maine) [2]

	Total Traffic
Work/Work-related	61%
Recreational	18%
Shopping	12%
Other	9%

Analysis Assumption

	Total Traffic	Truck Traffic
Work/Work-related	58%	97%
Recreational	25%	3%
Shopping	12%	0%
Other	5%	0%

[1] Presque Isle Maysville Connector Road Feasibility Study; Maine Department of Transportation Bureau of Planning; 1988

[2] Presque Isle Traffic Assignments; Maine Department of Transportation Bureau of Planning; 1989.

Easton Industrial Access Road Study

Traffic Growth Estimate

Total Traffic

Location	Regional Model Data [1]			2001 Existing [2]		2023 NoBuild
	1995	2030	Avg Gwth	JULY DATA	AADT	AADT
Route 1 Presque Isle						
Route 1 (Main Street) between State Street and Route 10 (Academy Street)	6250	10480	1.49%	15300	13005	18000
Burlock Road/Marston Road				883	751	1000
Conant Road (west of Route 10)				1300	1105	1500
					Seasonal Adj.[3] 0.85	

Trucks

Location	Regional Model Data [1]			2001 Existing [2]		2023 NoBuild
	1995	2030	Avg Gwth	JULY DATA	ADTT	ADTT
Route 1 Presque Isle						
Route 1 (Main Street) between State Street and Route 10 (Academy Street)	365	565	1.26%	1900	1615	2100
Burlock Road/Marston Road				55	47	100
Conant Road (west of Route 10)				160	136	200
					Seasonal Adj.[3] 0.85	

[1] AADT from the Aroostook County Regional Travel Demand Model

[2] From automated traffic recorder data collected in July 2001

[3] Seasonal adjustment factor from MDOT historical data.

**Easton Industrial Access Road Study
Traffic Demand Estimate**

Easton Industrial Area - Inbound Trucks

				POSSIBLE ARRIVAL ROUTES		ARRIVAL DISTRIBUTIONS		TRUCKS PER YEAR		RUCKS PER DAY			
Product	Origin	Destination	Direction	Trucks per Year	Trucks per day [1]	Possible Route A	Possible Route B	Route A Dist	Route B Dist	Route A	Route B	Route A	Route B
McCain , Pallet Repair	Presque Isle	Easton	Through Presque Isle	250	1	Path 1		100%		250	-	1	0
McCain, tatermeal operation	Presque Isle	Easton	Through Presque Isle	4,800	19	Path 1	Path 8	80%	20%	3,840	960	15	4
McCain, tatermeal operation, water	Presque Isle	Easton	Through Presque Isle	884	4	Path 1	Path 8	80%	20%	707	177	3	1
McCain, Finished (full)	From the north	Easton	Through Presque Isle	6,293	25	Path 2	Path 9	50%	50%	3,147	3,147	13	13
McCain, supplies/ingredients	Presque Isle	Easton	Through Presque Isle	1,500	6	Path 2	Path 9	50%	50%	750	750	3	3
McCain, Raw potato (full)	Easton	Easton	Through Easton	1,991	8	Path 3	Path 6	50%	50%	996	996	4	4
McCain, Raw potato (full)	Mars Hill	Easton	Through Easton	1,622	6	Path 3	Path 6	50%	50%	811	811	3	3
McCain, Raw potato (full)	Exeter	Easton	Through Easton	51	0	Path 3	Path 6	50%	50%	26	26	0	0
McCain, Raw potato (full)	Littleton	Easton	Through Easton	1,214	5	Path 3	Path 6	50%	50%	607	607	3	3
McCain, Raw potato (full)	Bridgewater	Easton	Through Easton	478	2	Path 3	Path 6	50%	50%	239	239	1	1
McCain, Raw potato (full)	Lee	Easton	Through Easton	51	0	Path 3	Path 6	50%	50%	26	26	0	0
McCain, Raw potato (full)	Sherman Mills	Easton	Through Easton	109	0	Path 3	Path 6	50%	50%	55	55	0	0
McCain , Finished product storage	Caribou	Easton	Through Fort Fairfield	1,000	4	Path 4	Path 10	50%	50%	500	500	2	2
McCain, Raw potato (full)	Perham	Easton	Through Presque Isle	134	1	Path 5	Path 2	25%	75%	34	101	0	1
McCain, Raw potato (full)	Caribou	Easton	Through Presque Isle	1,870	7	Path 5	Path 2	25%	75%	468	1,403	2	5
McCain, Raw potato (full)	Presque Isle	Easton	Through Presque Isle	2,191	9	Path 5	Path 2	25%	75%	548	1,643	2	7
McCain, Raw potato (full)	Mapleton	Easton	Through Presque Isle	916	4	Path 5	Path 2	25%	75%	229	687	1	3
McCain, Raw potato (full)	Van Buren	Easton	Through Presque Isle	617	2	Path 5	Path 2	25%	75%	154	463	1	2
McCain, Raw potato (full)	Ashland	Easton	Through Presque Isle	1,311	5	Path 5	Path 2		100%	-	1,311	0	5
McCain, Raw potato (full)	Sinclair	Easton	Through Presque Isle	60	0	Path 5	Path 2	25%	75%	15	45	0	0
McCain, Raw potato (full)	Washburn	Easton	Through Presque Isle	697	3	Path 5	Path 2	25%	75%	174	523	1	2
McCain, Raw potato (full)	St. Agatha	Easton	Through Presque Isle	461	2	Path 5	Path 2	25%	75%	115	346	1	2
McCain, Raw potato (full)	New Sweden	Easton	Through Presque Isle	172	1	Path 5	Path 2	25%	75%	43	129	0	1
McCain, Raw potato (full)	Grand Isle	Easton	Through Fort Fairfield	687	3	Path 5	Path 10	50%	50%	344	344	2	2
McCain, Processed peas (full) [2]	Washburn	Easton	Through Presque Isle	130	1	Path 5	Path 2	25%	75%	33	98	0	1
Huber , Raw wood [3]	Aroostook County, North/West of Easton	Easton	Through Presque Isle	2,290	7	Path 5	Path 2	25%	75%	573	1,718	2	5
Huber , UPS/FedEx	Presque Isle	Easton	Through Presque Isle	720	3	Path 5	Path 2	25%	75%	180	540	1	2
McCain, Finished (full)	From the north	Easton	Through Presque Isle/Fc	4,195	17	Path 5	Path 7	25%	75%	1,049	3,146	4	13
McCain, Raw potato (full)	Hamlin	Easton	Through Fort Fairfield	826	3	Path 6		100%		826	-	3	0
McCain, Raw potato (full)	Limestone	Easton	Through Fort Fairfield	5,103	20	Path 6		100%		5,103	-	20	0
McCain, Raw potato (full)	Fort Fairfield	Easton	Through Fort Fairfield	898	4	Path 6		100%		898	-	4	0
McCain, McCain Canada to Easton	PEI	Easton	Through Fort Fairfield	50	0	Path 7		100%		50	-	0	0

[1] Assumes 250 days per year

[2] 130 trucks from September through June (10 month period). Daily estimate assumes 210 days per year

[3] 335 production days per year. Of the 11,434 inbound truckloads from Aroostook County, assumes 20% travel through Presque Isle.

Note: McCain Data includes increases associated with plan expansion.

Path 1 - Industrial Park to State Road to Parsons Street to State Street to Route 1 to Academy Street to Conant Road to Station Road to Richardson Road

Path 2 - Route 1 to Academy Street to Conant Road to Station Road to Richardson Road

Path 3 - Route 10 to Richardson Road

Path 4 - Route 161 to Route 1A to Conant Road to Station Road to Richardson Road

Path 5 - Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road

Path 6 - Route 1A to Conant Road to Station Road to Richardson Road

Path 7 - Route 1A to Route 10 to Richardson Road

Path 8 - Industrial Park to State Road to Parsons Street to State Street to Route 1 to Route 10 to Richardson Road

Path 9 - Route 1 to Academy Street to Route 10 to Richardson Road

Path 10 - Route 161 to Route 1A to Route 10 to Richardson Road

**Easton Industrial Access Road Study
Traffic Demand Estimate**

Easton Industrial Area - Inbound Non-Trucks

				SIBLE ARRIVAL ROUTE		ARRIVAL DISTRIBUTIONS		VEHICLES PER YEAR		VEHICLES PER DAY			
Product	Origin	Destination	Direction	Vehicles per Year	Vehicles per day	Route A	Route B	Route A Dist	Route B Dist	Route A	Route B	Route A	Route B
McCain, employees [1]	various[2]	Easton	Through Presque Isle	50,000	200	Path 1	Path 2	50%	50%	25,000	25,000	100	100
Huber, employees	Mapleton	Easton	Through Presque Isle	1,250	5	Path 1	Path 2	50%	50%	625	625	3	3
Huber, employees	Presque Isle	Easton	Through Presque Isle	6,750	27	Path 1	Path 2	50%	50%	3,375	3,375	14	14
Huber, employees	Pernham	Easton	Through Presque Isle	500	2	Path 1	Path 2	50%	50%	250	250	1	1
Huber, employees	Washburn	Easton	Through Presque Isle	5,000	20	Path 1	Path 2	50%	50%	2,500	2,500	10	10
Huber, employees	Ashland	Easton	Through Presque Isle	500	2	Path 1	Path 2	50%	50%	250	250	1	1
Huber, employees	Caribou	Easton	Through Presque Isle	4,000	16	Path 1	Path 2	50%	50%	2,000	2,000	8	8
Huber, employees	Crouseville	Easton	Through Presque Isle	1,500	6	Path 1	Path 2	50%	50%	750	750	3	3

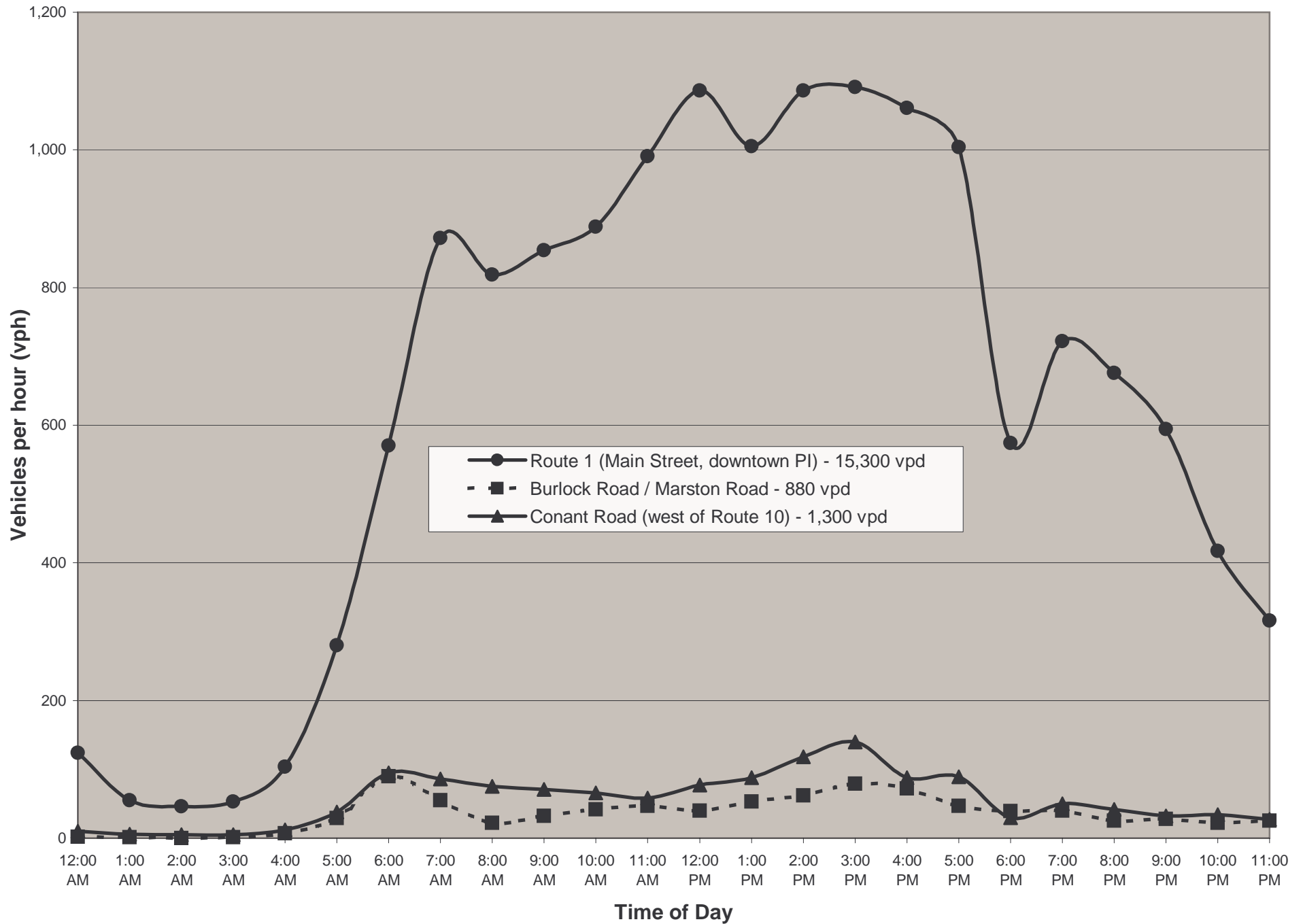
[1] Assumes 250 days per year

[2] 90 % from Central Aroostook County (Mars Hill, PI, Caribou, Washburn, Limestone, Easton, Fort Fairfield, Mapleton); 10% from Ashland, Van Buren, South of Mars Hill. Assume 50% travel through Presque Isle.

Path 1 - Route 163/167 to Burlock Road to Conant Road to Station Road to Richardson Road

Path 2 - Route 1 to Academy Street to Conant Road to Station Road to Richardson Road

Easton Industrial Access Road Study
Automated Traffic Recorder Data



Appendix C

Public Participation Documentation

1 TRANSCRIPT OF PROCEEDINGS

2
3 MAINE DEPARTMENT OF TRANSPORTATION
4 INFORMATIONAL MEETING

5
6
7 December 27, 2000

8
9 NEW HIGHWAY CONSTRUCTION CONNECTION

10
11 RE: To seek input regarding the proposed new highway
12 construction connection, Conant Road at the
13 Station Road intersection to Route 163 at
14 approximately the Presque Isle/Fort Fairfield town
15 line

16
17
18 Project Identification Number 8852.10
19
20

21
22 Amy Laurel Bland
23 BROWN KEENE & HALTEMAN
24 711 Main Street
25 Post Office Box 1538
Bangor, Maine 04401



Vanasse Hangen Brustlin, Inc.

101 Walnut Street
Post Office Box 9151
Watertown, MA 02471-9151
Telephone (617) 924-1770
Fax (617) 924-2286

Meeting Notes

Attendees: Dave Hewett, Delia Kaye, Joe
Wanat, VHB
Michael Corey, Vern, Maine
Potato Board

Date/Time: 6/5/01

Project No.: 07648

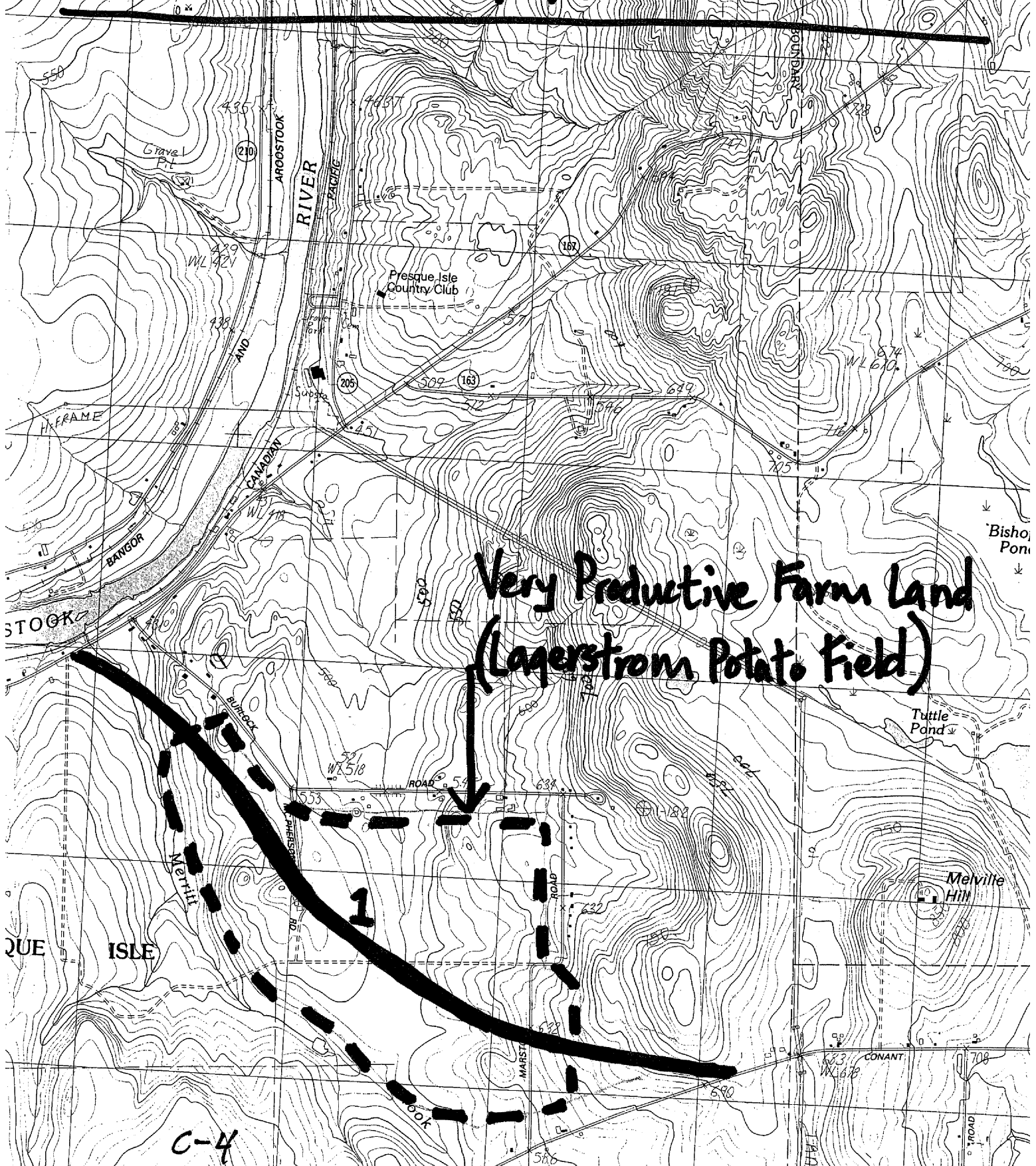
Place: Maine Potato Board

Re: Easton Industrial Access Road Issues

Notes taken by: JTW

We met briefly with Michael and Vern to discuss issues associated with the proposed corridors. Michael stressed the importance of the Lagerstrom potato field, noting that it was one of the most productive fields in the County. The attached map shows the approximate bounds. Corridor 1 negatively impacts this field because it bisects productive potato fields and requires altering the irrigation system to the fields. The other corridors do not impact this field.

Map from Meeting with Maine Potato Board on 6/5/01



Very Productive Farm Land
(Lagerstrom Potato Field)

C-4



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Meeting Notes

Attendees: Richard Hoppe, MDIF&W
Dave Hewett, VHB
Delia Kaye, VHB

Date/Time: June 6, 2001 9:00 a.m.

Project No.: 07648

Place: MDIF&W office, Ashland, ME

Re: Easton

Notes taken by: Delia Kaye

Dave Hewett and I met with Richard Hoppe, Region G Wildlife Biologist for the Maine Department of Inland Fisheries and Wildlife (MDIF&W) to discuss the potential alignments for the proposed Industrial Access Road to the McCain's Processing Plant and the Huber Wood Manufacturing Plant in Easton. MDIF&W's main concern is constructing a road near the Christina Reservoir, which is a state-designated Significant Wildlife Habitat (inland wading bird and waterfowl habitat). According to Rich, the Christina Reservoir is the second-most productive waterfowl site in the state, and is a high-value recreational area for waterfowl hunters. He suggested we contact Jerry Longcore with USFWS in Old Town, who has conducted extensive waterfowl studies at Christina Reservoir and Lake Josephine (the industrial waste pond south of Christina Reservoir).

In addition to the Significant Wildlife Habitat designation of the Reservoir, Rich mentioned that the upland sandpiper (state-threatened) and the short-eared owl (state Species of Special Concern) are documented breeders in the fields at the southwest end of Christina Reservoir.

Dave asked whether certain water levels needed to be maintained in the Reservoir, and who controlled the levels. Rich said there were levels that needed to be maintained, and that Bill Daniels, McCain's Environmental Coordinator, would know the actual water levels. Rich also said that there was a minimum outflow requirement, possibly to do with downstream fisheries, but wasn't sure what the requirements were for this. He also mentioned algal blooms downstream from spraying water on fields from the nutrient-rich Lake Josephine, and that the streams are occasionally flushed with water from the Reservoir to offset the blooms. MDIF&W has allowed irrigation from the Reservoir as well. June 15th is generally the earliest that irrigation has been allowed, because by this time 95 percent of the waterfowl young of the year have fledged.

Richard asked us to send him a copy of the potential alignments for his review once they've been laid out. He has a copy of the three alignments proposed by Maine DOT, and a copy of the Environmental Assessment submitted for the project in December 2000, and indicated that the only alignment he had a problem with was the one along the west end of the Christina Reservoir (Alternative Three). The primary issue for his office was not wetlands, but the disturbance to wildlife from truck traffic. He said he wouldn't have a problem if Alternative Three was realigned west of the wetland system associated with the west end of the Christina Reservoir. Similarly,

Alternative Two could be realigned along the Easton/Fort Fairfield town line, terminating at Route 163. We told him that another potential alignment will likely be along the west side of Merritt Brook, and he said that although he didn't think this would be a problem he would need to look more closely at the alignment, as well as have it reviewed by Dave Basely (Region G Fisheries Biologist).

Note: I spoke with Jerry Longcore on June 11, 2001, and he is sending us a copy of the brood production studies for Christina Reservoir. He concurred that the Christina Reservoir is highly productive, possibly due to nutrient loading from spraying water from Lake Josephine. He also said that American widgeon, northern shovelers, and possibly northern pintail breed at the Reservoir. The Reservoir is also important to waterfowl during the molt, because the dense cover provides a safe haven for flightless waterfowl. Regarding an improved road through the west end of the Reservoir, his thoughts were that species that are sensitive to human disturbance, such as black duck, would drop in reproductive productivity. He also indicated that deer, moose, and migrating herpetofauna might be adversely impacted by increased traffic on this road.



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Meeting Notes

Attendees: Ray Faucher - MEDOT
Richard Bostwick - ENV
Mike Clark - ENV
Jim Linker - FHWA
Duane Scott - Planning
Jerry Waldo -
Warren Foster - Director,
Bureau of Project
Development
Steve Michaud - Right of Way
Sylvia Michaud - ENV
Dean Vandusen - ENV
Ruth Bonsignore - VHB

Date/Time: June 22, 2001, 9:00 A.M

Project No.: 07648

Place: Augusta, Maine

Re: Easton Industrial Highway

Notes taken by: Ruth Bonsignore

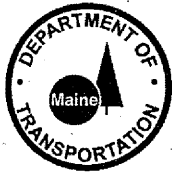
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- Ray introduced project briefly to the Team. Most were familiar with the progress to date and prior alignments considered. A critical issue is the schedule and whether or not this project can be under construction by next year.
 - Ray turned meeting over to Ruth for a status report on VHB's work.
 - Two maps were overviewed to the Team: Study Area context, and conceptual alignments. (These were left with Ray and Mike Clark).
 - Ruth updated people on issues with the original three alignments:
 - Alignment 1 – goes through the middle of the Lagerstroam Farm
 - Alignment 2 – requires extensive right-of-way and has grade issues
 - Alignment 3 – All on McCain's property but impacts the Christina Reservoir (the second most productive waterfowl breeding habitat in the state).
 - VHB completed the first round of fieldwork on June 6, 2001. From that work, seven conceptual alignments have been developed. VHB would also be considering Corridors L and F from the Aroostook County Transportation Study as alternatives to improve access to the Easton Industrial Area. Corridors L (and Alts. 1A/1B) would be necessitate upgrades to Conant Road.
 - VHB met with Richard Hoppe and representatives from the Maine Potato Board regarding study area issues. (Meeting notes given to Ray Faucher).
 - Traffic counts underway this week and week of July 9.

Comments/Questions

- MDOT has done some preliminary fieldwork on Alt. 3 (will forward notes to VHB).
- Why doesn't corridor 2B/3B go further west to avoid wetland area? VHB needs to verify wetlands from aerial photography and additional field review. Alignment shown skirts between two farms.
- Do we have a map that shows farmlands? We have information and will be using aerial photos to show farms.
- VHB should explain trade-off between wetlands and farmland impacts.
- Preferred north-south corridor will impact Easton action. (ie. if F is preferred corridor – that would likely become the Easton Industrial Access Road).
- Are we impacting prime and unique farmland based on USEPA maps? If so, FPPA requires an analysis by county to assess impacts.
- What are McCain's plans for Christina Reservoir?
- Is Christina Reservoir greater than 30 acres (if so could classify and be regulated as a "Great Pond").
- Present farmlands information to inter-agency committee.
- Change color on map for emergent marsh category (don't use red).

Schedule

- Schedule is dependent upon outcome of ACTS meetings in June and July.
- Dean would like to have his mitigation consultant under way by August. (He has got an RFQ out now for a consultant)
- The schedule for NRPA and 404 permit applications is (was) September. This is problematic given EA schedule.
- A suggestion was made to take this project to the interagency meeting on July 10, 2001. Ray agreed to get in on the agenda.
- Need to give MDOT a sense on preferred corridor by mid-July, so they can follow-up with fieldwork.
- VHB requested prior documentation:
 - NRPA Application (received)
 - STPA Documentation (received)
 - June Environmental Meeting Notes (received)
 - Field Notes (awaiting)
- Confirmed that VHB will proceed with conceptual alignments on older aerial photographs.
- Ray indicated mapping would be available in August.
- Draft schedule submitted to Ray for review.



STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

NOTICE OF INFORMATIONAL PUBLIC MEETING IN EASTON

REGARDING A PROPOSED NEW CONNECTOR ROAD FROM THE CONANT
ROAD TO ROUTES 163 AND 167

THURSDAY, AUGUST 16, 2001

**FROM 6:00 p.m. TO 8:00 p.m. AT THE
EASTON ELEMENTARY SCHOOL**

The Maine Department of Transportation is currently developing plans to improve access to the McCain's and Huber facilities located on Station Road in Easton from Routes 163 and 167 located in the communities of Presque Isle and Fort Fairfield.

Representatives of the Maine Department of Transportation will be available on Thursday evening August 16, 2001 from 6:00 p.m. to 8:00 p.m. to listen to present and discuss such plans, listen to concerns, receive comments, and answer questions about the project. Anyone with an interest in the project is invited to attend and participate in the meeting.

Accommodations will be made for persons with disabilities. Auxiliary aids will be provided upon advance request.

Any inquiries regarding this project may be directed to the attention of Ray Faucher, Project Manager, Maine Department of Transportation, Bureau of Planning, Research, and Community Services, Child Street, 16 State House Station, Augusta, Maine 04333-0016. Telephone (207) 287-4119.

Project Identification Number 6462.11/Federal Aid Project Number HP-6462(11)E

TDD Telephone (207) 287-3392



Vanasse Hangen Brustlin, Inc.

101 Walnut Street
Post Office Box 9151
Watertown, MA 02471-9151
Telephone (617) 924-1770
Fax (617) 924-2286

Meeting Notes

Attendees: See Attached
Ray Faucher - MDOT
Jerry Waldo - MDOT
Ruth Bonsignore - VHB
Dave Hewitt - VHB

Date/Time: 8-16-01 6:00 PM

Project No.: 07648.00

Place: Easton Elementary School

Re: Easton Public Meeting

Notes taken by: Ruth Bonsignore

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- Ray Faucher welcomed the public (about 40 persons in attendance), introduced the team, and overviewed the project.
 - Dave Hewett then reviewed the project purpose and need, existing travel patterns, and screening process
 - The meeting was then opened up for comments and questions from the public:
- Q. (Tom Fitzherbert) If you put Corridor F/K out in the middle of nowhere, trucks aren't going to use it. They are going to use Route 205. Are there any plans to improve Route 205?
- A. Explained the location of Corridor F/K in the context of the overall study and regional traffic benefits. There are no plans to upgrade Route 205.
- C. (Tom Fitzherbert) Need to think what the connection to the intermodel faculty as McCains is using that now. Doesn't think F/K is going to divert these trucks.
- Q. (Phil Chase) Do truckers have a choice which route to take?
- A. We are assuming that they do for this analysis and that they will choose the shortest/fastest route.
- C. (Llewellyn White) Operates trucking firm. Always uses Conant/Burlock Roads to Presque Isle. Avoids Academy/State because they're always a problem. Prefers Corridor 2A.
- Q. (Paul Lagerstrom) Glad to see Corridors 1/1A/1B taken off the table. Why has Corridor 2A replaced 2 (he farms that land now)?
- A. To soften the grades along the alignment.
- Q. (Noel Currie) Most of the traffic uses Conant Road now. Doesn't it make more sense to upgrade Conant Road? Asked for clarification on what the choices are.

- A. Dave explained: Build H/L and upgrade Conant Road; build H/L and 2A; or build F/K.
- C. (Noel Currie) Seems to make the most sense to build H/L and upgrade Conant Road.
- C. (Tom Fitzherbert) Corridor F hits Route 163 at the worst possible location due to upgrades.
- C. (Richard Barker) Likes the idea of making improvements over to Route 1A.
- A. Not the purpose of this project.
- C. (Carl Nightindale) Thinks we're crazy putting people over Route 163 and that hill ("Chicken Hill").
- Q. (David Durgis) What is Presque Isle's position on the bypass corridor?
- A. They haven't taken one yet. The Planning Board is supposed to be meeting tonight to discuss it. City Council held a meeting in early August but had poor attendance/limited input.
- Q. (Julie Daly) I am a Route 163 resident and I don't want to see anything going across Route 163, or anywhere near it. Do we have an alternative that eliminates the use of Route 163?
- A. Yes – Corridor H/L to Conant Road and Corridor 2A.
- C. (Carl Nightindale) Trucks are not going to use Route 167 due to grades.
- C. (Dan Witham) Sees that eastern bypass has the most benefit, but concerned about how this study is getting held up by larger N/S decision.
- C. (Tom Fitzherbert) Thinks H makes the most sense south of Presque Isle to I-95. Told that there would be a road (the Easton Industrial Access) under construction last year. Are we now stuck with waiting for the big study recommendation?
- A. Yes and no. We think the two studies will come together over the next month or two. Easton documentation and construction can then proceed and the big study won't be completed until (hopefully) next summer.
- Q. (Dan Witham) Does DOT have a specific timetable?
- A. The schedule for the road is to complete the permitting and design this winter and begin construction next year.
- Q. (Dan Witham) How do you make a decision on the Easton Industrial Access Road without knowing where you're headed with the N/S highway?
- A. We are hoping to have that sense over the next month.
- C. (Tom Fitzherbert) If you decide to do F/K, can you move it a little to take my house?
- Q. (Dan Witham) Asked for clarification as to where L is in relationship to Centerline Road (shown on map).
- C. (Dan Witham) Seems like Presque Isle wants it both ways. They want good air quality and no congestion and they want development. Seems unfair – they need to compromise a little.

Q. (Phil Chase) Which corridor doe DOT like best?

A. The three that are still on the table for review/input (Corridor H/L with an upgrade of Conant Road, Corridor 2A, and Corridor F/K). We are here tonight to get your input and insight on what makes the most sense locally.

Q. (Conrad Caron) Financially which causes the DOT the least grief?

A. Probably Corridor 2A in the near-term.

C. (Llewellyn White) Need to provide a connection southbound to the new N/S roadway – south of Easton. None of the trucks going south will use new road to the north.

Q. (Hollis Smith) Believes the cheapest way out (and best) is to upgrade Route 163 to (old) Alternative 3. Will this be a state maintained road?

A. Yes.

C. (Bruce Root) Is a farmer in the area – believes Corridor 1 is no good for the farmers, Corridor 2 is too steep and Corridor 3 is the best. Presque Isle has an early season for geese and he questions the natural resource impacts.

Q. (Julie Daly) How many trucks use Route 163 now – it was mentioned at the last meeting?

A. Over 40,000 per year.

C. (Gary Wilmette) Thinks Corridor 2/2A has least amount of impacts and is preferred.

C. (Tom Fitzherbert) Hill on Corridor 2A is minimal – shouldn't be a problem compared to what they are traveling over today.

- The meeting adjourned at 7:45 PM but the study team stayed on-hand until 8:15 to answer individual questions.
- Maps are available for review at the MDOT Division Office on Rice Street in Presque Isle.

Appendix D

Air Quality Analysis



Air Quality

The 1990 Clean Air Act Amendments (CAAA) and the Maine State Implementation Plan (SIP) require that a proposed project not cause any new violation of the National Ambient Air Quality Standards (NAAQS), or increase the frequency or severity of any existing violations, or delay attainment of any NAAQS.

The purpose of the air quality analysis is to assess whether construction of the Preferred Alternative could result in adverse regional or local air quality impacts. The Study Area is located in the towns of Presque Isle and Easton in Aroostook County, currently designated as attainment for ozone and carbon monoxide (CO). Ozone is a pollutant of regional concern and is evaluated based upon the change in the precursor emissions of volatile organic compounds (VOC) and nitrogen oxides (NO_x). Carbon monoxide is a local concern and is evaluated based upon CO concentrations at congested intersections.

The air quality analysis evaluated CO concentrations at the most congested intersection in the town of Presque Isle. The purpose of this analysis is to demonstrate that the proposed project does not have the potential to result in adverse impacts to local air quality. Compared to existing and No Build conditions, the proposed project is not expected to result in a substantial change in traffic volumes or highway speeds that would affect regional traffic along Route 1 through Presque Isle. Therefore, no regional analysis of air quality emissions will be conducted.

The following paragraphs describe existing air quality conditions in the Study Area in terms of their conformance with the NAAQS that are relevant to transportation projects in the Study Area.

Air Quality Standards

The NAAQS have been established by the U.S. Environmental Protection Agency (EPA) to protect public health and welfare. Table D-1 presents the NAAQS for the major pollutants, both primary and secondary, which are relevant to transportation projects in the Study Area.

Ozone and carbon monoxide (CO) are the primary pollutants of concern when evaluating impacts from transportation projects. Ozone is not emitted directly by mobile sources. It is formed in a complex chemical process that occurs when precursor emissions, volatile organic compounds (VOC) and nitrogen oxides (NO_x), react in the presence of

sunlight and heat. The highest levels of ozone typically occur during the summer months. CO is emitted primarily by motor vehicles. The highest concentrations of CO typically occur near congested intersections during the winter, when cold temperatures cause inefficient engine operation.

Table D-1
National Ambient Air Quality Standards Relevant to the Study Area

Pollutant	Averaging Period	Primary ($\mu\text{g}/\text{m}^3$) ²
Carbon Monoxide (CO)	8 hours ¹	10,000 (9 ppm) ³
	1 hour ¹	40,000 (35 ppm) ³
Nitrogen Dioxide (NO ₂)	Annual	100 (0.05 ppm)
Ozone	1 hour ⁴	240 (0.12 ppm)

(1) Not to be exceeded more than once a year.

(2) Micrograms per cubic meter.

(3) Parts per million.

(4) Not to be exceeded more than an average of one day per year over a three year period.

The passage of the CAAA resulted in Maine being divided into attainment and non-attainment areas, with classifications based upon the severity of their air quality problems. The Study Area is located in Aroostook County, which is currently designated as attainment for ozone and CO. This means that existing levels of CO and ozone do not exceed the NAAQS.

Methodology

As shown in Table D-2, the NAAQS for CO is 35 parts per million (ppm) for a 1-hour period and 9 ppm for an 8-hour period, each not to be exceeded more than once per year. The predominant source of pollution anticipated from the study corridors is emissions from motor vehicle traffic. CO is directly emitted by motor vehicles and its impacts can be estimated by computer modeling.

The objective of the microscale (local) analysis was to evaluate the CO concentrations at the most congested intersection in the Study Area during the peak CO season (winter). The intersections in the Study Area were ranked based on traffic volumes and level of service. The intersection of Route 1 (Main Street) at State Street in Presque Isle was selected for analysis because it had the highest traffic volumes and worst level of service. The microscale analysis used the highest traffic volumes from the future conditions to represent the worst-case scenario. All other

intersections had lower traffic volumes and therefore, would have lower CO concentrations.

The microscale analysis calculates maximum 1-hour and 8-hour CO concentrations, using the EPA's CAL3QHC¹ computer model. The CAL3QHC model calculates the air quality impacts from vehicles in both free-flow and idle operation by creating a three-dimensional model that represents the highway and receptor geometry. Traffic, emission, and meteorological data were entered into the model to predict maximum 1-hour CO concentrations. The 8-hour CO concentrations were derived by applying a persistence factor of 0.7 to the 1-hour CO concentrations. EPA recommends the use of a 0.7 persistence factor when monitoring data for a local area are not available.

The CO concentrations presented in the results include background CO concentrations. The background concentrations are the constant and diffuse levels of CO that are always present due to numerous sources throughout the area. Background CO concentrations of 1.0 ppm for the 1-hour analysis and 0.7 ppm for the 8-hour analysis were used.

The vehicle emission factors used in the microscale analysis were obtained using the EPA MOBILE5b² computer model. MOBILE5b calculates CO emission factors for motor vehicles in grams per vehicle-mile. The emission factors calculated for this study were adjusted to reflect Maine-specific conditions, such as temperature representative of the winter CO season, and assume that there is no Inspection and Maintenance program.

Impacts

The microscale analysis demonstrated that the CO concentrations at the most congested intersection were well below the NAAQS for CO. Based upon this worst-case analysis, none of the corridors are expected to result in adverse local air quality impacts.

¹ User's Guide to CAL3QHC Version 2.0: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections, US Environmental Protection Agency, Office of Air Quality Planning and Standards, Technical Support Division; Research Triangle Park, NC; EPA-454/R-92-006; November 1992.

² The September 1996 release of MOBILE5b (Mobile Source Emission Factor Model), US EPA, Office of Mobile Sources, Ann Arbor, MI.

Table D-2
Intersection of Route 1 at State Street -Air Quality Results

Carbon Monoxide (CO)	1-hour (ppm)¹	8-hour (ppm)
Existing	5.1	3.6
2023 No Build	5.9	4.1
2023 Build Corridors	5.8	4.1

¹ The concentrations are expressed in parts per million (ppm) and include a background concentration of 1.0 ppm for the 1-hour analysis and 0.7 ppm for the 8-hour analysis.

The 2023 No Build CO concentration for the 1-hour analysis was calculated to be 5.9 ppm and for the 8-hour analysis was calculated to be 4.1 ppm. The results from the microscale analysis show that CO concentrations for the 2023 No Build condition are below the NAAQS of 35 ppm (1-hour) and 9 ppm (8-hour).

The 2023 Build CO concentration for the 1-hour analysis was calculated to be 5.8 ppm and for the 8-hour analysis was calculated to be 4.1 ppm. Under the 2023 Build condition, the rerouting of traffic from downtown Presque Isle results in lower levels of CO concentration for both the 1-hour and 8-hour analyses, as compared to the 2023 No Build condition. These results demonstrate that, under all future conditions, predicted CO concentrations are substantially below the NAAQS of 35 ppm (1-hour) and 9 ppm (8-hour).

The air quality analysis demonstrates that the Easton Industrial Access Road would be in compliance with the 1990 Clean Air Act Amendments and the Maine State Implementation Plan. The results of the microscale analysis demonstrate that the proposed project will not create CO violations in locations where violations do not currently exist. In fact, the results demonstrate that no CO violations currently exist in the Study Area. The microscale analysis also demonstrates that CO concentrations for the No Build and Build alternatives are all predicted to be below the NAAQS standards for CO.